m dolor sit amet, continued tincidunt ut laored minim veniam, quistuip ex ea commod nodor sit amet, a Based on the Guidelines of National Education Policy (NEP)-2020 and Syllabus prescribed by N.C.E.R.T.

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Intellectual MATHEMATICS

- **♦ Learning Tips**
- ♦ Maths Lab Activity
- ♦ MCQs
- **♦** Worksheets

Author: Sandeep Kashyap (M.Sc., B.Ed.)

Help Kit 1 to 5





MATHEMATICS-1

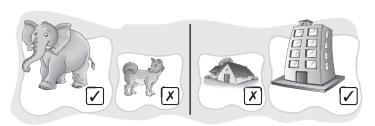


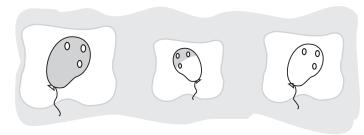
Pre-number Concepts

Roll Back

Tick (\checkmark) the bigger one and cross (X) the smaller.

Colour the smallest green and biggest red.





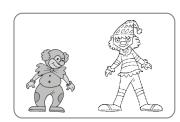
Taller and Shorter

Tick (\checkmark) the taller one and cross (X) the smaller.

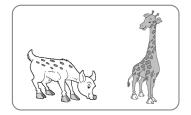




Colour the shorter Joker.

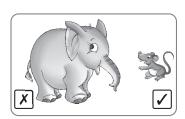


Colour the taller animal.



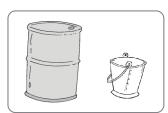
Heavier and Lighter

Tick (\checkmark) the lighter one and cross (X) the heavier.

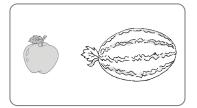




Colour the heavier object.



Colour the lighter object.



Inside and Houtside

Colour the object which is outside.





Colour the object which is inside.





Chapter

2

Numbers up to 20

Roll Back

Count and write how many:







6



6



2



1



Recognition of Numbers 1 to 9

Count the number of objects and write how many.



1 | 1 | One



2 | 2

Two



3 3 Three



4 | 4 |

Four



5 | 5 | Five



6 6





7 | 7 | Seven



8

8 | Eight



9 |

Nine

Count and write the number and number names.



3 Three



Six



Five

Eight





1 One



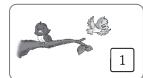
Concept of Zero

Count and write the number of birds on the branch.











Building Number Upto 20

Write the number and number names.

11	ELEVEN	11	ELEVEN	11	ELEVEN
13	THIRTEEN	13	THIRTEEN	13	THIRTEEN
15	FIFTEEN	15	FIFTEEN	15	FIFTEEN
17	SEVENTEEN	17	SEVENTEEN	17	SEVENTEEN
19	NINETEEN	19	NINETEEN	19	NINETEEN

12	TWELVE	12	TWELVE	12	TWELVE
14	FOURTEEN	14	FOURTEEN	14	FOURTEEN
16	SIXTEEN	16	SIXTEEN	16	SIXTEEN
18	EIGHTEEN	18	EIGHTEEN	18	EIGHTEEN
20	TWENTY	20	TWENTY	20	TWENTY

Before, After and Between

Write the number which comes just before.

Write the number which comes just after.

 6
 7
 0
 1
 11
 12
 16
 17
 17

 13
 14
 4
 5
 8
 9
 12
 13

11 12 0 1 9 10 17 18

Write the number which comes just between.

6 7 8 1 2 3 9 10 11 14 15 16 10 11 12 18 19 20 17 18 19 7 8 9 5 6 7

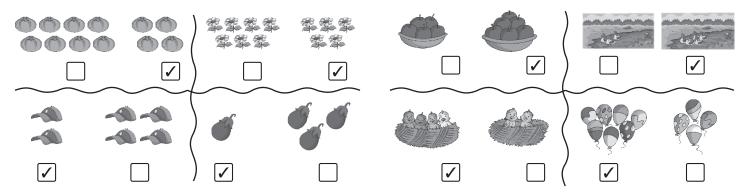
Comparing Numbers

Smaller Numbers

Tick (\checkmark) the group which has less.

Bigger Numbers

Tick (\checkmark) the group which has more.



MATHEMATICS-1

Ascending and Descending order

Arrange the numbers in ascending order.

17, 19, 18, 13

13

17

18

3, 8, 9, 5

3

20, 6, 7, 14

20

Arrange the numbers in descending order.

14

6

16, 8, 9, 13

4, 2, 1, 5

8

9

13

16

19

14, 6, 8, 10

14

10

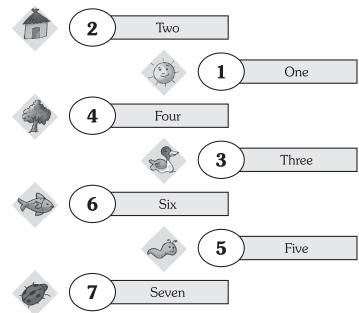
8

6

NEP The 4Cs: Core Learning Skills

Count each object in the picture and write its numeral and number name.





Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (a)

2. (c)

3. (a)

Chapter

Addition Up To 10

Roll Back

Look at this picture of a park. Add and write how many.



2 squirrels on the tree + 1 squirrel at the ground = 3 squirrels

5 red flowers + 2 white flowers = 7 flowers

3 red balloons + 5 green balloons = 8 balloons

1 neem tree + 4 Ashoka trees = 5 trees

Add By Counting Objects

How many in all? Count and write.





$$\boxed{2} + \boxed{3} = \boxed{5}$$

and is
$$4 + 3 = 7$$
 and is

$$\boxed{4} + \boxed{3} = \boxed{7}$$

$$\boxed{3} + \boxed{3} = \boxed{6}$$

Colour the stars and add the groups.

$$\boxed{2} + \boxed{2} = \boxed{4}$$

$$1 + 4 = 5$$

Add on the Number Strip

Add these numbers using the number strip.

$$2 + 1 = \boxed{3} \boxed{0 \ 1 \ 2}$$

$$2 + 1 = 3$$
 $0 1 2 3 4 5 6 7 8 9 10$



Adding One

Add.

$$7 + 0 = \boxed{7}$$
 $8 + 0 = \boxed{8}$ $5 + 1 = \boxed{6}$ $3 + 0 = \boxed{3}$ $6 + 1 = \boxed{7}$

$$5 + 1 = 6$$

$$3 + 0 = \boxed{3}$$

$$6 + 1 = 7$$

$$2 + 1 = \boxed{3}$$

$$9 + 0 = 9$$

$$2 + 1 = \boxed{3}$$
 $0 + 5 = \boxed{5}$ $9 + 0 = \boxed{9}$ $1 + 4 = \boxed{5}$

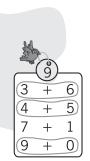
the numbers which Angry bird is holding.

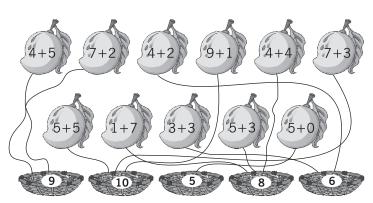
Circle the pairs of numbers that add up to Add the numbers and join the mangoes to the correct baskets.





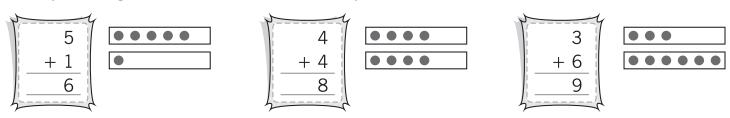






Vertical Addition By Drawing Dots

Add by drawing dots. One has been done for you.



Add.



Order in Addition

Fill in the blanks.

Addition Three Numbers

Add these numbers.

$$2 + 3 + 1 = 6$$

$$1 + 7 + 2 = 10$$

$$6 + 2 + 1 = 9$$

$$6 + 0 + 1 = 7$$

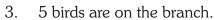
$$8 + 1 + 0 = 9$$

$$3 + 1 + 5 = 9$$

Story Sums

Solve these story sums.

- 3 puppies are under the table.
 4 puppies are on the table.
 There are 3 + 4 = 7 puppies in all.
- 2. Ajay has 3 books.
 Sonia gives him 3 more books.
 Now, Ajay has 3 + 3 = 6 books in all.

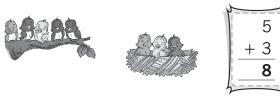


3 birds are in the nest.





There are $\mathbf{5} + \mathbf{3} = \mathbf{8}$ birds in all.

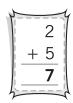


One pencil costs 2 rupees. 4.

One pen cost 5 rupees.

The total cost of both is (2) + (5) = (7) rupees.



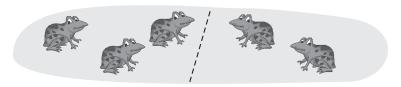


NEP Adaptive Education

Read, count and add.

3 frogs

2 more

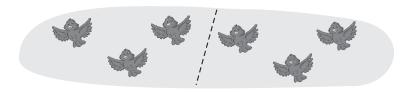


In all, **5** frogs.



3 birds are flying.

3 more join.

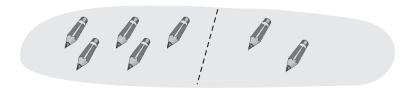


In all, **6** birds.



I have 5 pencils.

I get 2 more.

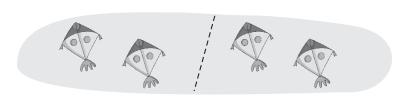


in all, **7** pencils.



Rohit has 2 kites.

He get 2 more.



In all, 4 kites.



Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (b)

Subtraction up to 10

Roll Back

Count and write in the boxes.



Mohit has | 6 | balloons.



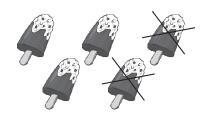
4 balloons blow with the wind.



So, **2** balloons are left.

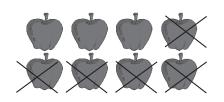
Understanding Subtraction

Cross out, count and write.



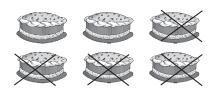
From 5 ice-cream take away 2.

$$5 - 2 = 3$$



From 8 apples take away 5.

$$8 - 5 = 3$$



From 6 cakes take away 4.

$$6 - 4 = 2$$



From 7 laddoos take away 3.

$$7 - 3 = 4$$



From 4 toy cars take away 1.

$$4 - 1 = 3$$



From 8 pens take away 2.

$$8 - 2 = 6$$

Subtracting One

Subtract 1 and write the numbers in the boxes.

$$4 - 1 = 3$$

$$7 - 1 = 6$$

$$5 - 1 = 4$$

$$4-1=3$$
 $7-1=6$ $5-1=4$ $8-1=7$ $6-1=5$ $9-1=8$

$$6 - 1 = 5$$

$$9 - 1 = 8$$

Subtracting Zero

Subtract.

$$5 - 0 = 5$$

$$8 - 0 = 8$$

$$1 - 0 = 1$$

$$8 - 0 = 8$$
 $1 - 0 = 1$ $3 - 0 = 3$ $2 - 0 = 2$ $10 - 0 = 10$

$$2 - 0 = 2$$

$$10 - 0 = 10$$

Count Back To Subtract

Subtract by counting backward.

$$2 - 1 = 1$$

$$7 - 3 = 4$$

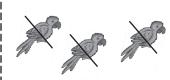
$$8 - 5 = 3$$

Subtracting a Number from Itself

Subtract.

















$$1 - 1 = \mathbf{0}$$

$$4 - 4 = 0$$

Vertical Subtraction

Cross (X) out, count and write the answer in











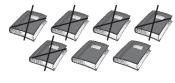
$$\frac{3}{-2}$$













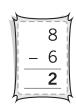


Story Sums

Solve the following.

Rahul is carrying 8 books. 6 books fall down.





How many are left?

There are 8 - 6 = 2 books are left.

3. There are 7 mangoes in the basket.

Prakhar ate 2 mangoes.



How many are left?

There are 7 - 2 = 5 mangoes are left.

2. Rohan had 8 balloons.

3 balloons burst.





How many are left?

There are 8 - 3 = 5 balloons are left.

There were 6 samosas on the plate.

4 were eaten.



How many are left?

There are 6 - 4 = 2 samosas are left.

Tricky Maths

Subtract the following numbers across and down:

$$9-4=5$$

$$\downarrow \qquad \downarrow \qquad \downarrow$$

$$3-2=1$$

$$\downarrow \qquad \downarrow \qquad \downarrow$$

$$6-2=4$$

$$8-4=4$$

$$\downarrow \qquad \downarrow \qquad \downarrow$$

$$5-4=1$$

$$\downarrow \qquad \downarrow \qquad \downarrow$$

$$3-0=3$$

$$6-3=3$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$2-0=2$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$4-3=1$$

NEP Cross - Cultural Learning

Do it yourself.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (a)

2. (b)

3. (b)

4. (c)

Chapter

Shapes & Patterns

Roll Back

Let us look at the names of the shapes. Join the dots and colour the shapes.



square



rectangle



circle



triangle

Identify the shapes in the figure.

- 1. Rectangle
- 3. Square
- 5. Triangle
- 7. Rectangle

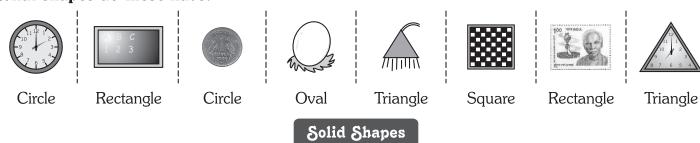
- 2. Triangle
- 4. Triangle
- 6. Circle
- Circle 8.

Colour the shapes to finish the pattern.



Plane Shapes

What shapes do these have?



Write the shape of each object.



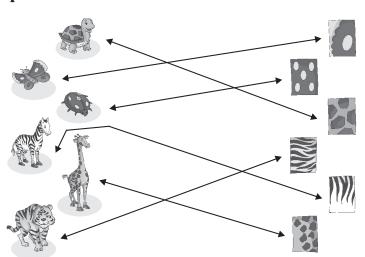
Rolling and Sliding

Tick (\checkmark) the objects that can roll and cross (X) the objects that can slide.

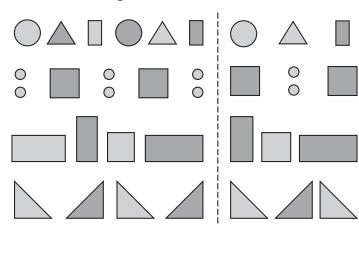


Patterns

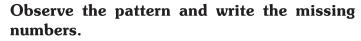
We see many patterns around us. Match the pattern to the correct animal.



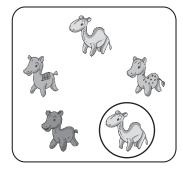
Continue the pattern.



Circle the picture that is exactly the same as the picture on top.









Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (b)

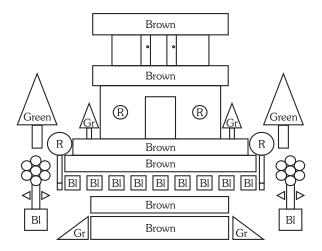
2. (a)

3. (c)

4. (c)

NEP Development of Traditional Knowledge

Colour the brown, the red, the green and the blue.

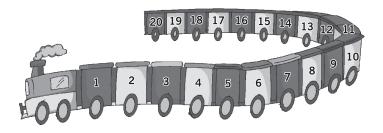


Chapter 6

Numbers up to 50

Roll Back

Write the missing numbers:



Fill in the blanks:

15 comes before169 comes after810 comes before1115 comes after1417 comes before1814 comes after13

Write the number names of the following: 4 **Four** Seven 13 Thirteen 18 Eighteen 10 Ten 16 Sixteen Numbers 21 To 30 Numbers 31 To 40 Read, say and write. Read, say and write. Ones Ones Tens # twenty-one 21 thirty-one 31 1 1 Ones Tens Tens Ones

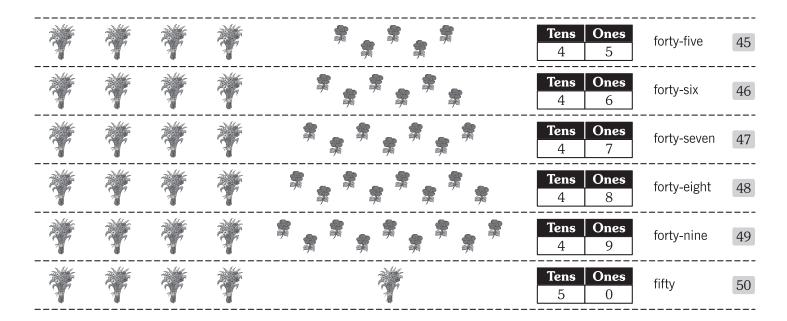


Numbers 41 To 50

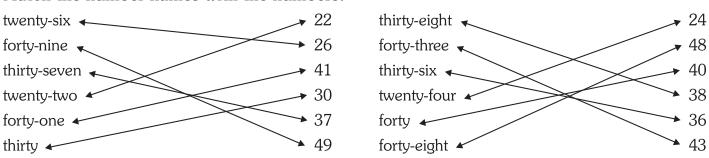
4

Read, say and write.

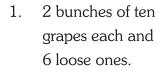
		*	Tens Ones 4 1	forty-one	41
		**	Tens Ones 4 2	forty-two	42
		* *	Tens Ones 4 3	forty-three	43
		* * *	Tens Ones 4 4	forty-four	44



Match the number names with the numbers.



How many? Count and write.





7		ı	
lens	Ones	_	26
2	6	_	20
_	0		



2. 3 bunches of ten flowers each and 2 loose ones.



Tens	Ones	_	29
3	2	_	32

3. 5 collections of ten leaves each.



Tens Ones 50 5 0

4. 3 baskets of ten mangoes each and 9 loose ones.



Tens Ones 39 3

5. 4 bundles of ten pencils each and 3 loose ones.



Tens	Ones	_
4	3	_

43

Writing Numbers 1 To 50

Complete the number grid.

Look at the number grid given above and write the

number	after
--------	-------

19	20
37	38
42	43
28	29

number in	
between	

27	28	29	
41	42	43	
10	11	12	
19	20	21	

number before

19	20	
40	41	
9	10	
4	5	

Expanded Form

Write the numbers as tens and ones.

$$36 = 3 \text{ tens} + 6 \text{ ones}$$

 $12 = 1 \text{ ten} + 2 \text{ ones}$

$$25 = 2 \text{ tens} + 5 \text{ ones}$$

 $10 = 1 \text{ ten} + 0 \text{ ones}$

Comparing Numbers

Circle the bigger and cross the smaller number.











> 18

10 > 1

Circle the smaller number.

Circle the smaller number.

Circle the biggest number.

Arrange the following in ascending order.

Arrange the following in descending order.

Tricky Maths

Fill in the blanks.

9 is the biggest one-digit number.

The number 34, 45 and 47 are is **ascending** order.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (a)

2. (b)

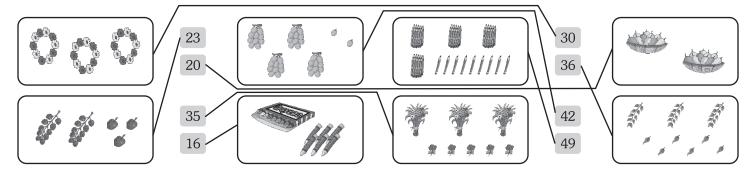
3. (c)

4. (c)



NEP Multiple Intelligence

Count and match the numbers.



Chapter

Measurement

Roll Back

Diya and Arnav are playing with their toys.

Tick (\checkmark) the object which is heavier:







Tick (\checkmark) the object which is longer:



Tick (\checkmark) the glass which has less water :





Measuring Lengths

Fill in the blanks.

Do yourself.

How long are these? Count and write.







about 5 crayons







about 6 erasers

Measuring Weights

Circle the lighter object and cross (X) out the heavier.









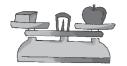








How many blocks does each weigh?



an apple weighs as much as 1 block.



the sugar packet weighs as much as (7) blocks.



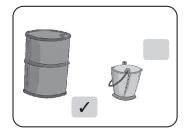
a lunch box weighs as much as 4 blocks.



a watermelon weighs as much as 9 blocks.

Measuring Capacity

Put a (\checkmark) on the container that holds more.





Mental Maths Corner (MCQ's) Tick (✓) the correct answer.

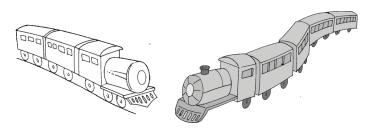
1. (c)

2. (b)

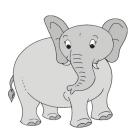
3. (c)

NEP Computational and Analytical Thinking

Colour the longer train.

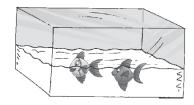


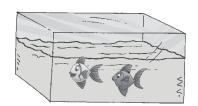
Colour the heavier animal.





Colour the aquarium which hold more water.





Numbers 51 to 100

Roll Back

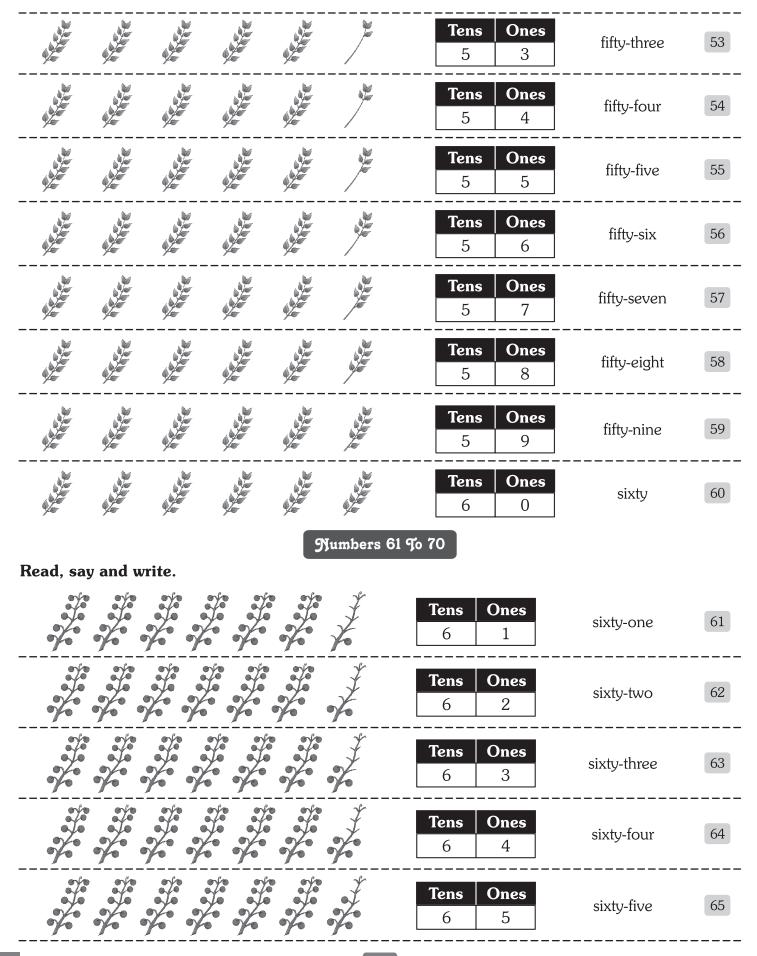
Count the following things. Fill in tens and ones, and write the number names for the numerals.

				Tens Ones 1 0	Ten
6 °C	6	6 6		Tens Ones 1 3	Thirteen
COLL		SOLUTION		TensOnes20	Twenty
		000	0 0	TensOnes27	Twenty-seven
				TensOnes33	Twenty-three
			6666	TensOnes47	Forty-seven
			999	Tens Ones 3 9	Thirty-nine
				TensOnes50	Fifty

Numbers 51 To 60

Read, say and write.

			Tens 5	Ones 1	fifty-one	51
			Tens 5	Ones 2	fifty-two	52



MATHEMATICS-1 20

TensOnes66	sixty-six	66
TensOnes67	sixty-seven	67
TensOnes68	sixty-eight	68
TensOnes69	sixty-nine	69
TensOnes70	Seventy	70

Numbers 71 To 80

Read, say and write.

				Tens 7	Ones 1	seventy-one	71
			6 6	Tens	Ones 2	seventy-two	72
			8 6	Tens	Ones 3	seventy-three	73
				Tens	Ones 4	seventy-four	74
			6 6 6	Tens 7	Ones 5	seventy-five	75
			6 6 6 6	Tens	Ones 6	seventy-six	76
			6 6 6 6	Tens	Ones	seventy-seven	77

					6	***	6		Tens	Ones 8	seventy-eight	[78]
					6	8 8	\$ \$ \$		Tens	Ones 9	seventy-nine	79
									Tens 8	Ones 0	eighty	80
D. J.		. 1	•4 .		(P)	um	bers	s 81 J	6 90			
Read, s	say a	na w	rite.									
			}		•				Tens 8	Ones	eighty-one	81
					4				Tens 8	Ones 2	eighty-two	82
									Tens 8	Ones	eighty-three	83
									Tens 8	Ones 4	eighty-four	84
)o			Tens 8	Ones 5	eighty-five	85
						90			Tens 8	Ones 6	eighty-six	86
									Tens 8	Ones	eighty-seven	87
					Tens Ones		eighty-eight	88				
						10			Tens 8	Ones 9	eighty-nine	89
	} }								Tens	Ones 0	ninety	90

0

MATHEMATICS-1 22

Numbers 91 To 100

Read, say and write.

	, , , , , , , , , , , , , , , , , , ,	(200	0	Tens	Ones	Ninety-one	91
			0 0	Tens	Ones 2	Ninety-two	92
600 6000 6000 6000 6000			0 0 0	Tens	Ones 3	Ninety-three	93
			0 0 0	Tens	Ones 4	Ninety-four	94
			0 0 0	Tens	Ones 5	Ninety-five	95
			0 0 0	Tens	Ones 6	Ninety-six	96
			0 0 0	Tens	Ones 7	Ninety-seven	97
6000 6000 6000 6000			0 0 0	Tens	Ones 8	Ninety-eight	98
			0 0 0	Tens	Ones 9	Ninety-nine	99
				Tens	Ones 0	One hundred	100

Numbers 51 To 100

Fill in the missing numbers in the number Write the number for each number name. bars.

our									
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

74
30
8
58
71
3

Write the number and its name.

- 7 tens + 6 ones
 - Seventy-six
- 6 tens + 9 ones
- Sixty-nine

- 9 tens + 4 ones
 - Ninety four
 - 9 tens + 9 ones
 - Ninety-nine

- 8 tens + 0 ones
 - Eighty
- 10 tens
 - One-hundred

Comparing Numbers

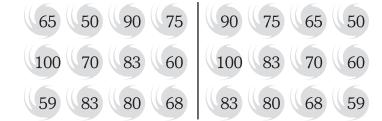
Tick (\checkmark) the bigger number and cross (X) the smaller number.

x 58	/ 83	x 80	√ 98	x 55	6 0	x 57	√ 75
	9 3	x 72	x 67	√ 76	x 61	√ 88	

Tick (\checkmark) the biggest number and cross (X) the smallest number in each set.

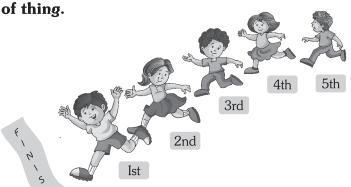
Rewrite the numbers from the smallest to the biggest.

Rewrite the numbers from the biggest to the smallest.



Ordinal Numbers

Ordinal numbers show the position or order



Write the position of the children.







Third

Fifth

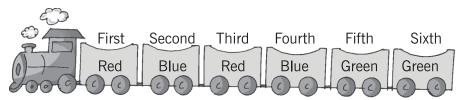




Second

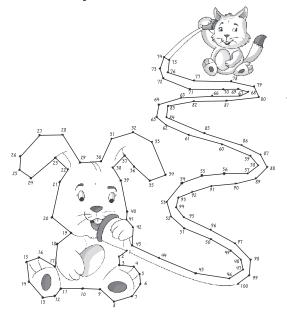
Fourth

Colour the 1st, 3rd wagons red, 2nd and 4th wagons blue and 5th and 6th wagons green.



NEP SDGs for Qualitative Education

Join the dots from 1 to 100. What do you see?



Chapter 9

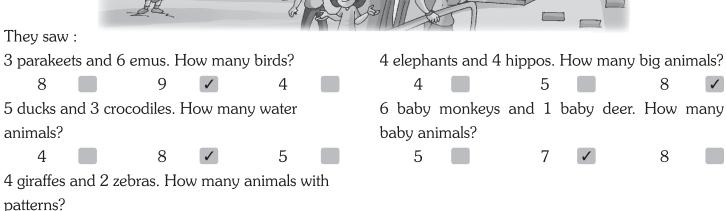
Addition and Subtraction up to 100

Roll Back

9

Dipali, Ruhi, Ansh and Jeet went to the zoo. They saw many animals. Help them to add and tick (\checkmark) the correct answer.



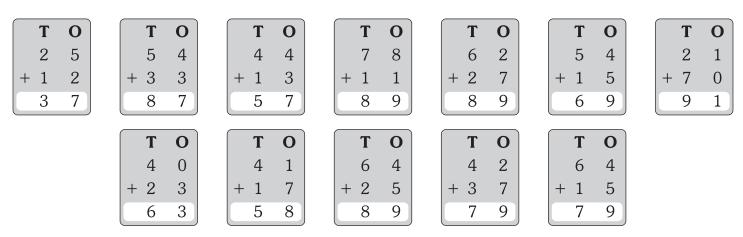


Addition without Regrouping

Add.

	T	0	T 4 + 4	0	T	0	T	0	T	0	T	0	T	0	T	0
	3	7	4	3	6	4	9	0	1	4	6	2	8	0	5	6
-	⊢	2	+	5	+	3	+	4	+	5	+	5	+	7	+	3
	3	9	4	8	6	7	9	4	1	9	6	7	8	7	5	9

Add.



Regrouping Tens and Ones

Regroup the following numbers.

7 tens and 13 ones	7 tens + 1 ten + 3 ones	$\bf 8$ tens and $\bf 3$ ones
8 tens and 12 ones	8 tens + 1 ten + 2 ones	9 tens and 2 ones
4 tens and 15 ones	4 tens + 1 ten + 5 ones	$\bf 5$ tens and $\bf 5$ ones

Addition with Regrouping

Add the following.

	3					
T O	TO	T O	TO	T O	T O	TO
1	1	1	1	1	1	1
6 6	5 6	5 5	3 8	6 7	5 6	1 8
+ 1 5	+ 3 4	+ 6	+ 2 7	+ 1 3	+ 2 9	+ 4 6
8 1	9 0	6 1	6 5	8 0	8 5	6 4
	TO	TO	T O	TO	T O	
		1 0		1 0	1 0	
	1	1	1			
	2 4	1 9	6 5	2 9	7 3	
	+ 8	+ 1 1	+ 2 7	+ 4 5	+ 1 8	
	3 2	3 0	9 2	7 4	9 1	

Story Sums

Read and solve.

1. There are 16 boys and 14 girls in my class. How many children in my class?

16 + 14 = 30 children in all.



2. There are 26 desks and 52 chairs. How many desks and chairs in all?

26 + 52 = 78 desks and chairs in all.



3. 29 plants are with flowers and 26 plants are without flowers. How many plants in all?

29 + 26 = 55 plants in all.



4. There are 47 children in class I A. 42 in class I B. How many children in all?

47 + 42 = 89 children in all.



5. 25 children are playing football. 27 are playing other games. How many children in all?

25 + 27 = 52 children in all.



Subtraction without Regrouping

Subtract and write.

Subtract.

T	0	T	0	T	0	T	0	T	0	T	0	T	0
9	7	7	8	6	7	7	8	8	9	5	2	6	0
- 4	5	- 3	5	- 2	4	- 3	7	- 1	9	- 4	2	- 2	0
T 9 - 4 5	2	4	3	4	3	4	1	7	0	1	0	4	0

Regrouping Tens and Ones

Regroup the following numbers by borrowing one ten from tens.

$$54 = 5 \text{ tens} + 4 \text{ ones} = 4 \text{ tens} + 14 \text{ ones}$$
 $72 = 7 \text{ tens} + 2 \text{ ones} = 6 \text{ tens} + 12 \text{ ones}$

$$95 = 9 \text{ tens} + 5 \text{ ones} = 8 \text{ tens} + 15 \text{ ones}$$

Subtraction with Regrouping

Subtract the following numbers.

Story Sums

Read and solve the following story sums:

1. There were 32 persons in a bus. Out of them 21 are boys. How many are girls?

$$32 - 21 = 11$$
 are girls.

There were 35 sandwiches.
29 were eaten. How many are left
35 - 29 = 6 sandwiches are left.



$$60 - 25 = 35$$
 birds are left.

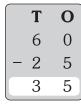












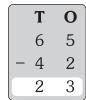
4. There were 50 balloons. 27 of them burst. How many are left? $\mathbf{50} - \mathbf{27} = \mathbf{23}$ balloons are left.



5. Teacher had 65 mangoes. She distributes 42 of them to the children. How many mangoes are left?

65 - 42 = 23 mangoes are left.





Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (b)

2. (a)

NEP Computational and Analytical Thinking

280

85 0

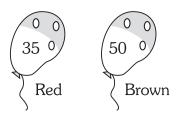
Blue

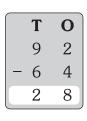
Solve these. Colour the balloons given in the middle according to the colour key.

19 0

Orange

42 0





blue

85

15 0

36 0

Pink

Money

(/)

Roll Back

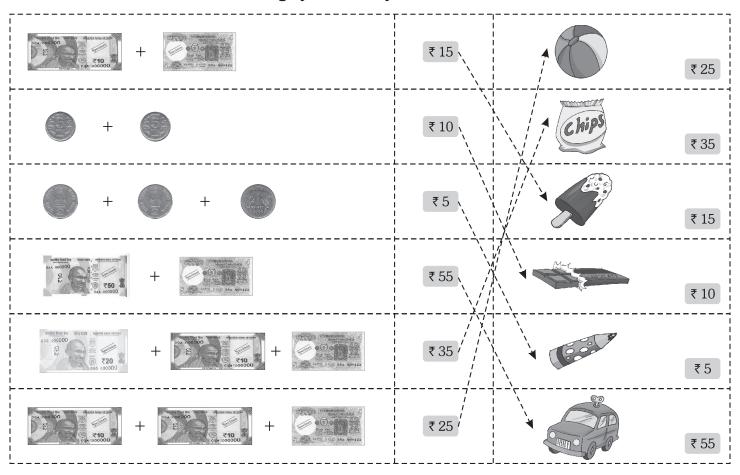


Rimmy and Simmy want to have pencils and erasers. Shopkeeper is giving them pencils and erasers. What will they give the shopkeeper.

Books Pen Water Money

Counting Money

Match the total value with the things you can buy with it.



NEP Life Skills

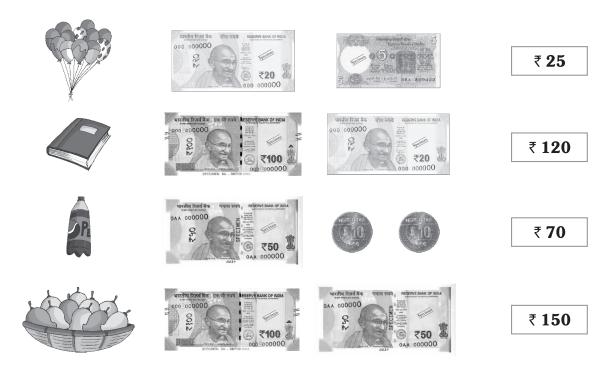
Rohan and Jenny are visiting a home for poor children. They have bought some gifts for them. Count the money and write the cost of each item.







₹ 15



Mental Maths Corner (MCQ's)



1. (c)

2. (a)

3. (b)

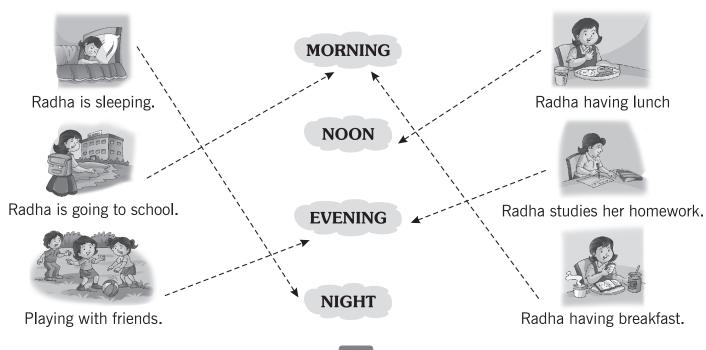
4. (c)



Time

Roll Back

Match the time with correct activity.



Reading Time

Write the missing numbers on the clock.





Draw the hour hand on each clock to show the time. Remember the hour hand is shorter than the minute hand.







10 o'clock



6 o'clock



2 o'clock

Write the time in two ways.



6 o'clock 6.00



3 o'clock 3.00



7 o'clock 7.00



10 o'clock 10.00



1 o'clock 1.00



9 o'clock 9.00

Draw the hands of the clock to show the time.



9 o'clock



1 o'clock



7 o'clock



5 o'clock

Days of the Week

Help Parth to find the days of the week in the wordsearch.

T	S	U	N	D	Α	Y	Α	M	P
Q	А	В	С	D D	Е	F	G	О	J
Е	Т	U	Е	S	D	Α	Y	N	Н
I	U	S	T	S A	D	Α	U	D	I
F	R	I	D	Α	Y	Α	C	A	K
Α	D	Α	Е	V	Q	G	Е	Y	L
F	A	С	D	W	С	Е	N	Е	M
S	Y	T	Н	U	R	S	D	Α	Y
Е	V	S	R	W	R	Α	Q	V	O
W	Е	D	N	Е	S	D	Α	Y	P



Tick (\checkmark) for True and Cross (X) for False :

Sunday is the first day of the week.

Saturday is the second day of the week.

Friday comes just after Thursday.

Thursday is in the middle of the week.

1

Months in a Year

Fill in the blanks.

February is the $\bf Second$ month of the year.

April is the **Fourth** month of the year.

May comes after April.

June is the **Sixth** month of the year.

July is between June and August.

August is the eighth month of the year.

October comes before **November**.

November is the **eleventh** month of the year.

December is the last month of the year.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (a)

3. (c)

NEP Development of Traditional Knowledge

Make a 'Festival Chart'! Work in groups of 5. Write the name of the festival. Write the date and the day. Paste pictures. Put it up in Class.

Festival	Date	Day	
Rakshabandhan	19.08.2024	Monday	
Diwali	01.11.2024	Friday	
Christmas	25.12.2024	Wednesday	
Eid	09.04.2024	Tuesday	

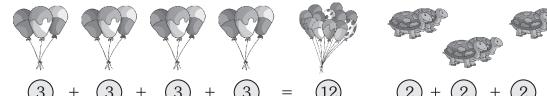
Chapter

12

Multiplication

Understanding Multiplication

Let us count.



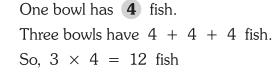


Let us count and write the multiplication result.







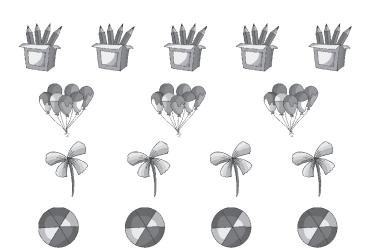








Flowers in 1 pot = 5
Flowers in 3 pots =
$$3 \times 5 = 15$$



Pencils in 1 box = 4

Pencils in 5 boxes = $5 \times 4 = 20$

Balloons in one bunch = **7**

Balloons in 3 bunches $= 3 \times 7 = 21$

Petals in one flower = 4

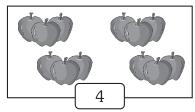
Petals in 4 flowers $= 4 \times 4 = 16$

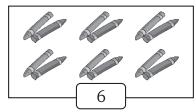
Colours in one wheel = **6**

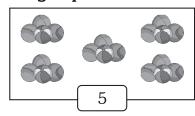
Colours in 4 wheels $= 4 \times 6 = 24$

Tricky Maths

How many groups of objects are there? Write the correct number of groups in the boxes.







Fill in the boxes using multiplication tables.

 $2 \times 4 = 8$

 $6 \times 3 = 18$

5 × 4 = 20

 $6 \times 4 = 24$

 $9 \times 2 = 18$

16

3

15

 $8 \times 3 = 24$

 $5 \times 5 = 25$

 $7 \times 3 = 21$

 $2 \times 5 = 10$

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

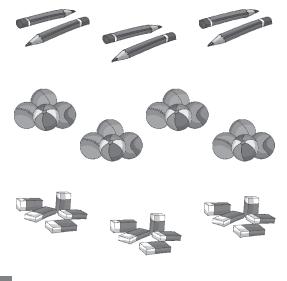
1. (a)

2. (b)

3. (a)

NEP Multiple Intelligence

Find:



How many groups are there?

How many pencils are there in each group?

The total number of pencils is

 $3 \times 2 = 6$

How many groups are there?

How many balls are there in each group?

The total number of balls is

 $4 \times 4 = 16$

How many groups are there?

How many erasers are there in each group?

The total number of erasers is

 $3 \times 5 = 15$





How many groups are there?

How many candles are there in each group?

The total number of candles is

$$2 \times 5 = 10$$

2

10

Chapter

13

Division

Division by Equal Grouping

Divide 12 balloons into 4 children.









$$12 \div 4 = 3$$

Divide 24 birds on the 4 branches.



Divide 30 eggs into 6 baskets.



Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (b)

3. (c)

Chapter



Data handling

Roll Back

Mr Rastogi is counting the number of toys in his shop. Help him count and write how many toys of each type are left.



Toy	0110	©		
Number	2	6	3	5

1. Which are more? Circle the correct picture.







2. Which is less, ball or toy monkey?

Toy monkey

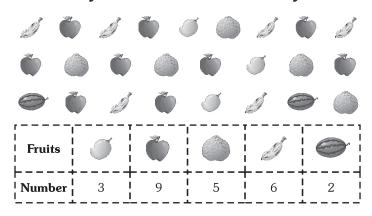
3. How many balls in the picture?

6 balls

4. How many toys are in the shop?

16 toys

How many of each kind of fruits do you see?



- 1. How many deer are there in the zoo?
- 3. How many fish in the water?



- 2. How many ducks are there in the zoo?
- 4. How many Giraffes are there?



Look at the picture and answer the questions below.



- 1. How many tomatoes are there in the field? **30**
- 2. How many brinjals are there? **6**
- 3. How many cauliflowers are there? 13
- 4. How many chillies are there? 10
- 5. Which are more?

Brinjal Tomatoes

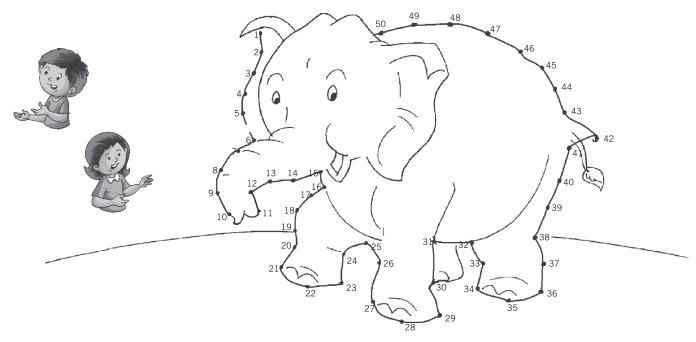
6. Which are less?

Chillies Cauliflowers X

Number up to 1000

Roll Back

Vidhya and Rohit visit to a painting exhibition. They saw the painting given below, which is not clear. Let us join the dots to see the picture.



A. Write the greater number in the big star. Write the smaller number in the small star.

29	50	99	65	47	56
50	29	99	65	56	47

B. Tick (✓) the correct spelling.

	· /	_	0	
40	forty	✓	fourty	
18	eighteen	✓	eigteen	
19	ninteen		nineteen	1
70	seventy	✓	sewentee	

A. Write the missing numbers in the grid:

100	101	102	103	104	105	106	107	108	109
110	111	112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127	128	129
130	131	132	133	134	135	136	137	138	139
140	141	142	143	144	145	146	147	148	149
150	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179
180	181	182	183	184	185	186	187	188	189
190	191	192	193	194	195	196	197	198	199
200									

Ordering Of Numbers

			_									
228	229	230	231	232	233	234	235	236	237	238	239	240
440	441	442	443	444	445	446	447	448	449	450	451	452
330	331	332	333	334	335	336	337	338	339	340	341	342
125	126	127	128	129	130	131	132	133	134	135	136	137
205	206	207	208	209	210	211	212	213	214	215	216	217
510	511	512	513	514	515	516	517	518	519	520	521	522
751	752	753	754	755	756	757	758	759	760	761	762	763
625	626	627	628	629	630	631	632	633	634	635	636	637
690	691	692	693	694	695	696	697	698	699	700	701	702
796	797	798	799	800	801	802	803	804	805	806	807	808
546	547	548	549	550	551	552	553	554	555	556	557	558
908	909	910	911	912	913	914	915	916	917	918	919	920
812	813	814	815	816	817	818	819	820	821	822	823	824
547	548	549	550	551	552	553	554	555	556	557	558	559
825	826	827	828	829	830	831	832	833	834	835	836	837

Exercise 1.1

A. Say and write the number:

$$= \begin{array}{c|cccc} H & T & O \\ \hline 1 & O & 7 \end{array}$$

$$= \begin{array}{c|cccc} H & T & O \\ \hline 1 & 2 & 8 \end{array}$$

199

B. Write the number.

- one hundred thirty-five 1.
- 2. one hundred eighteen
- one hundred sixty-eight

135

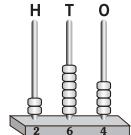
118

168

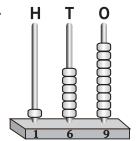
- 4.
- 5. one hundred ten
- one hundred ninety-nine
- one hundred ninety-seven 197
- 110

C. Write the number shown on each abacus.

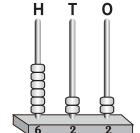
1.



2.



3.



D. Write the number names.

- 112 1. One hundred twelve.
- 2. 194 One hundred ninety-four.
- 3. 560 Five hundred Sixty.
- 4. 480 Four hundred eighty.
- 5. 907 Nine hundred seven.
- 880 Eight hundred eighty. 6.

Write the number that comes before.

- 117 118 1.
- 3. 118 119
- 2. 474 475
- 4. 105 106

507 798 5. 508 6. 799

Write the number that comes after. F.

- 2. 119 1. 130 131
- 3. 673 674 4. 251 252
- 5. 464 465 6. 954 455

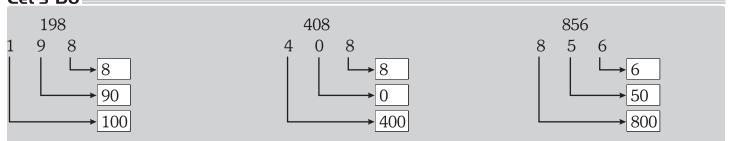
G. Write the number that comes between.

- 1. 117 **118** 119
- 2. 676 **677** 678

120

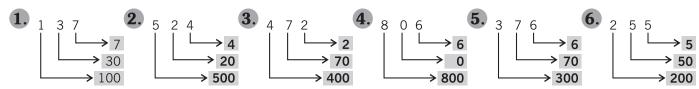
- 3. 712 **713** 714
- 4. 129 **130 131**
- 5. 964 **965** 966
- 6. 496 **497** 498

Let's Do 198 408 9 8 0 8 8

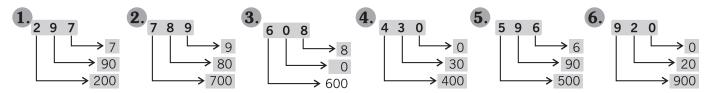


Exercise 1.2

Write the place value of each digit.



Write the number.



Write the numbers in their expanded form.

Number	Н	T	О	Expanded form
167	1	6	7	100 + 60 + 7
135	1	3	5	100 + 30 + 5
312	3	1	2	300 + 10 + 2
668	6	6	8	600 + 60 + 8
990	9	9	0	900 + 90 + 0
703	7	0	3	700 + 0 + 3
856	8	5	6	800 + 50 + 6

D. Write the place value of the coloured digit.

	J			
1.	1 5 2	50	2. 6 0 8	0
3.	1 56	100	4. 26 4	4
5	0/13	40	6 7 70	700

Fill in the blanks.

$$2 \text{ hundreds} + 3 \text{ tens} = 230$$
 $900 + 10 + 7 = 917$
 $7 \text{ hundreds} + 2 \text{ tens} + 9 \text{ ones} = 729$
 $600 + 90 + 2 = 692$

Let's Do

Fill in the blanks with > or <.

66 123 345 86 >

427 30 >

8 119 <

669

761

Fill in the blanks with > or <.

443 < 543 889 < 937

Let's Do

639 739 <

469 < 789

Let's Do

Let's Do

Fill in the blanks with > or <.

Fill in the blanks with > or <.

654

784

741 < 745 996 < 997

<

665 666 >

<

<

123

810

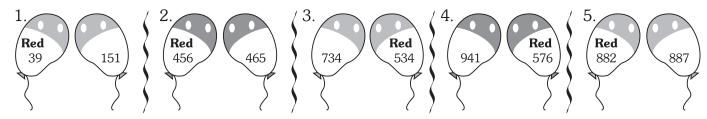
114 < 117

111

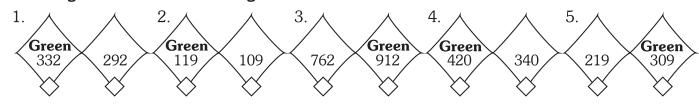
801

Exercise 1.3

Colour red the balloon with the smaller number.



Colour green the kite with the greater number.



C. Tick (\checkmark) the smallest number.

1. 134 100 2. 69 417 3. 436

124 437 112

5. 956 6. 732

4. 111

756 723 438 110

151

840

734

Circle the greatest number.

1. 112 | 190 86

2. 109 200 205

3. 459 458 457 4.636 741 950

5. 264 268 261 6.303 300 309

7. 146 375 931 8. 400 200 800

9. 650 950 875

Tricky Maths

The greatest 3-digit number is **999**

The smallest 3-digit number is **100**

Exercise 1.4

Oops! Gabdu has mixed up the numbers. Can you help him to write them in order from the smallest to greatest?

349

129

360

520

799

611

999

811

129

349

360

520

611

799

811

999

B. Arrange the following in ascending order:

1. 93, 427,372, 529

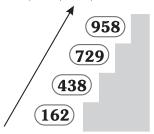
(427)

(372)

93)

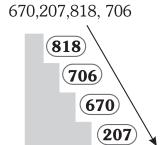
529)

- 2. 132, 418, 281, 630
 - (418) (281) (132)
- 3. 958,162,729,438



C. Arrange the following in descending order:

- 1. 638, 78,125,489
- 2. 951,224,728,439



(638) (489) (125) (78) 951 728 439 224

MCOs %

Tick (✓) the correct answer.

- 1. The number for one hundred eighty is
 - a. 118

) b. 180

c. 10080

3.

- 2. The place value of 3 in 232 is
 - a. 30

✓ b. 1

- c. 3

- 3. The number just before 900 is
 - a. 799

b. 890

- c. 899

- 4. One hundred forty-two is greater than
 - a. 145

b. 124

- c. 190

- 5. 64 is less than
 - a. fifty-six

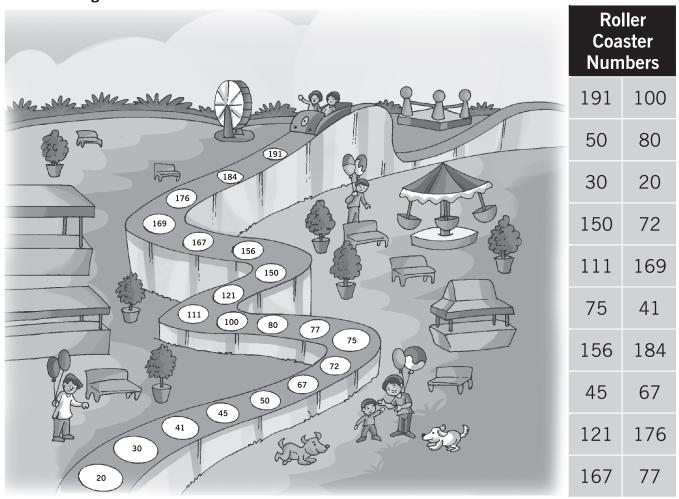
- b. one hundred
- c. sixty-two

NEP Adaptive Education

Do it yourself.

Worksheet

Help the children to descend the roller coaster by rearranging "Roller Coaster numbers" in the descending order.



See the picture given above and answer the following, then arrange the given below in descending order.

Number of ice-cream stalls Number of benches Number of balloons Number of children Number of dogs

(6)

Descending order

6 6 3 1

Chapter

Odd, Even and Ordinal Numbers

Number of potted plants

Write the next even number.

44 → **46**

 $68 \to 70$

Tricky Maths

Write the next odd number.

57 → **59**

79 → **81**

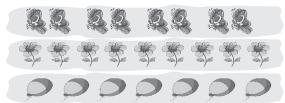
HOTS Questions

I am an even number between 1 and 10. I am less then 4.1 am 2.

I am an odd number between 1 and 10. I am greater than 5 but less than 9. I am 7.

Exercise 2.1

0









0



	Red	Green	Red	Red	Green	Red
	46	71	14	44	195	80
\						

- Green Red Green Green Red Red 149 247 430 512 618 867
- C. Pick out the odd numbers and write them on the line.
 - 14 29 40 43 46 **29.43**
 - 2. 153 262 306 395 443 153,395,443
 - 387 474 520 621 968 **387.621**
- D. Write the odd numbers between:
 - 16 and 22 17,19,21

- 24 2. and 30 25,27,29
- 3. 86 and 92 87,89,91
- 52 53,55,57 4. and 58
- Write the even numbers between: E.
 - 1. 41 and 47 42,44,46
 - 2. 35 and 41 36,38,40
 - 3. 63 and 69 64,66,68
 - 4. 77 and 83 78,80,82

Exercise 2.2

Join the kite to the children.

- 1. Fourth kite to the First child
- 2. Second kite to the fifth child
- 3. Fifth kite to the third child
- 4. Third kite to the fourth child
- 5. First kite to the second child

Fill in the blanks. B.

- 1. The first month of the year is **January**.
- 2. The third month of the year is **March**.
- 3. The fourth month of the year is **Apirl**.
- 4. The sixth month of the year is **June**.

- 5. Monday is the **first** day of the week.
- 6. Tuesday is the **Secound** day of the week.
- 7. Wednesday is the **third** day of the week.
- Friday is the **fifth** day of the week. 8.

Tick (✓) the correct answer.

- The largest 1- digit even number is
 - a. 8

a. even

√ b. 98

10 c.

- 2. 65 is an
- number.

- none of these

- In the word ANSWER, the fifth letter is:
- a. N

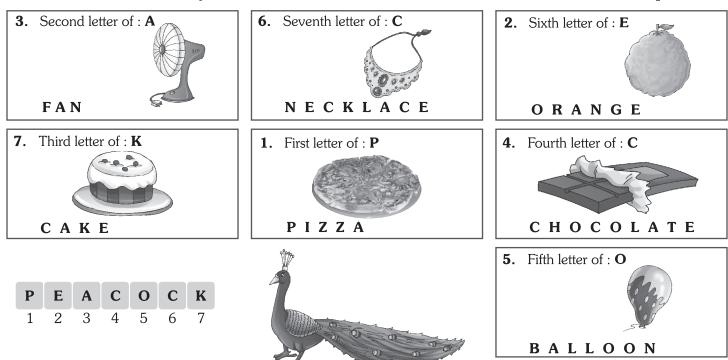
b. E

b. odd

R c.

NEP The 4Cs : Core Learning Skills

Write the name of the object and circle the letter mentioned in the box to solve the puzzle.

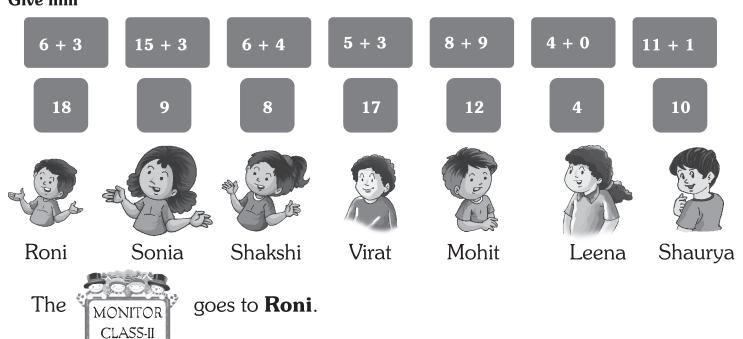


Chapter 3

Addition

Choose the monitor! Find the marks each has got. Write the answers in the correct box. Who got the highest marks?

Give him



Exercise 3.1

A. Find the sum by forward counting. Use the addition grid for help.

1.
$$45 + 3 = 48$$

2.
$$76 + 4 = 80$$

$$3. \quad 67 + 5 = 72$$

4.
$$38 + 2 = 40$$

5.
$$26 + 7 = 33$$

6.
$$34 + 8 = 42$$

B. Fill in the blanks:

1.
$$16 + 0 = 16$$

$$2. 11 + 1$$

$$3. \quad 49 + 0 = 49$$

$$4. \quad 5 + 16 = 16 + 5$$

5.
$$91 + \mathbf{0} = 91$$

6.
$$100 + 1 = 101$$

L∈t's Do

Add:

3.

=

12

7

0

2

7

9

Exercise 3.2

A. Add the following numbers.

9.

B. Find the sum:

3.

Let's Do

Add the following:

Exercise 3.3

A. Add the following numbers.

- 1. **H T O**4 3 5
 + 5 2 2 **9 5 7**
- H T O 6 3 5 + 2 6 3 8 9 8

2.

6.

2.

6.

- 3. **H T O**8 0 2
 + 1 0 3 **9 0 5**
- 4. **H T O**5 6 5
 + 2 3 4 **7 9 9**

- 5. **H T O**1 8 6
 + 6 1 3 **7 9 9**
- H T O 2 4 7 + 3 4 2 5 8 9
- 7. **H T O**7 4 2
 + 1 3 7 **8 7 9**
- 8. **H T O**2 1 7
 + 4 3 1 **6 4 8**

B. Find the sum.

- 1. **H T O**1 4 5
 + 2 1 2
 3 5 7
- 2. **H T O**4 3 7
 + 2 4 1 **6 7 8**
- 3. **H T O**3 5 9
 + 2 1 0 **5 6 9**
- 4. **H T O**6 0 0
 + 1 0 0 **7 0 0**

- 5. **H T O**9 6 1
 + 7 5 **10 3 6**
- 6. **H T O**6 9 4
 + 2 0 4 **8 9 8**

Exercise 3.4

A. Add the following numbers.

- 1. **H T O**3 3 9
 + 5 0 0 **8 3 9**
- **H T O** 3 0 0 + 2 0 0 **5 O O**
- 3. **H T O**5 0 0
 + 4 0 0 **9 0 0**
- 4. **H T O**6 0 0
 + 3 0 0 **9 0 0**

- 5. **H T O**4 6 8
 +1 0 0

 5 6 8
- H T O 5 4 8 +2 0 0 7 4 8
- 7. **H T O**2 4 8
 + 7 0 0 **9 4 8**
- 8. **H T O**7 9 6
 +1 0 0 **8 9 6**

B. Find the sum.

- 1. **H T O**1 4 5
 + 2 0 0

 3 4 5
- 2. **H T O**4 3 7
 + 5 0 0 **9 3 7**
- 3. **H T O**3 5 9
 + 3 0 0

 6 5 9
- 4. **H T O**6 0 0
 + 1 0 0 **7 0 0**

- 5. **H T O**9 6 1
 + 1 0 **9 7 1**
- 6. **H T O**6 9 4
 + 2 0 0 **8 9 4**

Let's Do

$$= \begin{array}{c} \times \\ \end{array} + \\ 17 \text{ ones} = \begin{array}{c} \times \\ \end{array} \text{ ten and } \begin{array}{c} \times \\ \end{array} \text{ ones}$$

Let's Do

Add the following:

3.
$$\begin{array}{c|c} \mathbf{T} & \mathbf{O} \\ 1^{\circ} & 6 \\ + & 4 & 7 \\ \hline \mathbf{6} & \mathbf{3} \end{array}$$

4.
$$\begin{array}{c|c} \mathbf{T}_{0} & \mathbf{O} \\ 6^{1} & 6 \\ + & 1 & 9 \\ \hline & \mathbf{8} & \mathbf{5} \end{array}$$

Exercise 3.5

3.

7.

A. Regroup the following numbers. One is done for you.

6.

4 tens 2 ones

4 tens 6 ones

7 tens 5 ones

B. Add the following by regrouping.

1.
$$\begin{array}{c} \mathbf{T}_{0} \mathbf{O} \\ 4^{0} 5 \\ + 6 \\ \hline \mathbf{5} \mathbf{1} \end{array}$$

7.
$$\begin{array}{c|c} \mathbf{T}_{(1)} \mathbf{O} \\ 2 & 7 \\ + 2 & 6 \\ \hline \mathbf{5} & \mathbf{3} \end{array}$$

B. Find the sum.

Let's Do

Add the following:

1. **H**
$$\mathbf{T}_{0}$$
 O 3 4° 7 + 4 2 5 **7 7 2**

2.
$$\begin{array}{c|cccc}
 & \mathbf{H}_{0} & \mathbf{T}_{0} & \mathbf{O} \\
 & 6^{0} & 9^{0} & 4 \\
 & + & 1 & 2 & 6 \\
\hline
 & \mathbf{8} & \mathbf{2} & \mathbf{0}
\end{array}$$

2.

10.

2.

6.

4.
$$\begin{array}{c|cccc}
 & \mathbf{H} & \mathbf{T}_{0} \mathbf{O} \\
 & 3 & 5^{0} 8 \\
 & + 4 & 2 & 2 \\
\hline
 & \mathbf{7} & \mathbf{8} & \mathbf{O}
\end{array}$$

Exercise 3.6

A. Add the following by regrouping.

8.
$$\begin{array}{ccccc}
 & \mathbf{H} & \mathbf{T} & \mathbf{O} \\
 & 4^{\circ} & 3^{\circ} & 5 \\
 & + 4 & 8 & 6 \\
\hline
 & \mathbf{9} & \mathbf{2} & \mathbf{1}
\end{array}$$

11.
$$\begin{array}{ccccc}
 & \mathbf{H} & \mathbf{T} & \mathbf{O} \\
 & 4^{(1)}6^{(1)}8 \\
 & + 3 & 7 & 6 \\
\hline
 & \mathbf{8} & \mathbf{4} & \mathbf{4}
\end{array}$$

B. Find the sum.

1.
$$\begin{array}{c|cccc}
\mathbf{H} & \mathbf{T} & \mathbf{O} \\
2^{1} & 4^{1} & 6 \\
+ 1 & 7 & 9 \\
\hline
\mathbf{4} & \mathbf{2} & \mathbf{5}
\end{array}$$

4.

L∈t´s Do≣

Exercise 3.7

3.

A. Arrange and add in your notebook.

6

3

2.

1. **H T O** 2⁰ 5⁰ 6 1 6 3 + 1 7

H T O 6¹ 2² 8 3 4 + 1 3 8 8 0 0

4.

5. **H T O** 4¹ 5¹ 9 1 7 1 + 1 0 **6 4 0**

6. **H T O**4 5 0
2 2 3
+1 5
6 8 8

Exercise 3.8

A. Solve these story sums:

1. Rohit's class planted 64 trees in the school garden. Soni's class planted 36 trees. How many trees did the classes planted?

H T O 6¹ 4 + 3 6 1 0 0

trees planted by Rohit's class trees planted by Soni's class



Answer: 100 trees planted by both classes.

2. In a school there are 386 boys and 424 girls. How many children study in the school?



H T O 3¹8¹6 + 4 2 4 8 1 0

Answer: 810 children study in the school.

3. Vinita read two books during her holidays. The books had 332 pages and 464 pages. How many pages did Vinita read in all?

H T O 3 3 2 +4 6 4 7 9 6

Pages in one book

Pages in secound book



Answer: Vinita read 796 pages in all.

4. Ankita has 32 red roses, 16 white roses and 45 pink roses. How many flowers does she have in all?



T₀ 3 Red roses

1 6
+ 4 5

9 3

Red roses

White roses

Pink roses

Answer: She have 93 flowers in all.

5. Sid baked 125 cookies on Sunday, 130 cookies on Monday and 145 cookies on Tuesday. How many cookies did he bake in all?



Cookies on Sunday Cookies on Monday Cookies on Tuesday

Answer: He bake 400 cookies in all.

Tick (✓) the correct answer.

- 1. 16 + 0 = ____
 - a. 16

✓ b. 0

c. 17

- 2. 48 + 19 = ____
 - a. 77

b. 67

- c. 57
- 3. Raghav spent $\ref{151}$ for cake and $\ref{65}$ for chocolates. How much money does he spend in all?
 - a. ₹116

b. ₹219

c. ₹216

- 4. 20 + 15 + 125 = 125 +
- + 20

a. 20

b. 15

c. 125

NEP Development of traditional knowledge

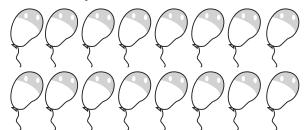
Sunflower glory

Solve the sums given on the flower pots and colour the pictures.

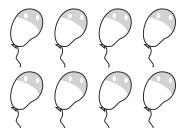
Subtraction

Roll Back

A. How many balloons were left with him now?



Total balloons



8 8

6

1

Balloons sold

В. How many are left:

2.

3.

Exercise 4.1

A. Find the difference by backward counting. Use the subtraction grid for help.

1.
$$45-7=$$
 38

2.
$$98 - 5 = 93$$

3.
$$87 - 8 = 79$$

4.
$$22-5=$$
 17

5.
$$56-4=$$
 52

6.
$$24-5 = 19$$

7.
$$76 - 9 = 67$$

8.
$$50-4=$$
 46

9.
$$39-2=$$
 37

B. Fill in the blanks:

1.
$$15-0=$$
4. $19-$ **19**

2.
$$77 - 1 =$$
76 5. $97 -$ **0** $= 97$

3.
$$46 - 46 = \mathbf{0}$$

4. Let's Do

Subtract the following:

15

= 0

Exercise 4.2

A. Subtract the following numbers.

4.

4.

Let's Do

Subtract the following:

2.

6.

2.

6..

9.

Exercise 4.3

A. Subtract the following numbers.

B. Arrange in columns and subtract:

Exercise 4.4

A. Subtract the following numbers.

T 0 0 0 -4 00 5 0 0

6.

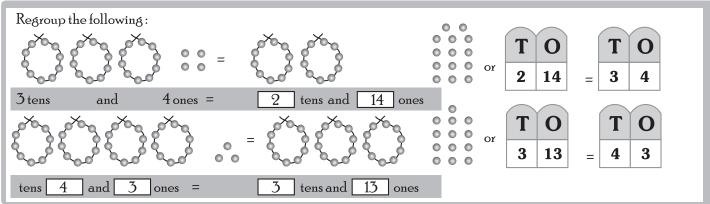
T 0 8 0 0 -6 0 0 0 2 0

7.

8.

T 0 2 6 7 $-2 \ 0 \ 0$ 4 2

Let's Do



Let's Do

Subtract the following:

1.

2.

3.

4.

Life Skill

How much change should she give him? Tick (✓) the correct option.

₹1

₹2

/

₹3

₹4

Let's Do

Subtract the following:

2.

3.

4.

Exercise 4.5

Subtract: A.

1.

Н T 0 3 2 5 – 1 5 1 5 7

2.

T 7 O Н 5 4 8 -2 6 8 9 1

3.

H 0 5 2 -2 6 2 6 6

4.

0 5 0 -29 5 2 7 5

6.

B. Find the difference:

4.

Exercise 4.6

2.

Subtract and check the answer by addition.

Exercise 4.7

1. There are 80 lilies in flower vase. 24 lilies are white. How many lilies are not white?

нто	
8 0	Lilies in flower vase
_ 2 4	While Lilies
5 6	



Answer: **56 lilies are not while.**

Amit has a box of 49 crayons. He took out 24 crayons from the box to colour this butterfly. How many crayons are left in the box.



Crayons in the box Crayons out from box

Answer: 25 crayons are left in the box.

3. There are 664 people in a stadium. 338 of them are boys. How many girls are there?

H 6	T 6	O 4
-3	3	8
3	2	6

Number of people in all Number of Boys



Answer: **326 girls in the stadium.**

A flower seller had 846 flowers. He sold 659 of them. How many flowers are left with him?



Flowers in all Sold flowers

Answer: 187 flowers are left with him.

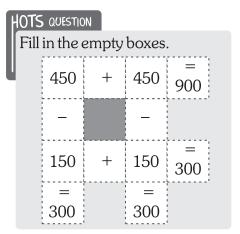
Fill in the blanks:

1. If
$$106 + 49 = 155$$
, then $155 - 106 = \boxed{49}$

2. If
$$75 + 115 = 190$$
, then $190 - 75 = \boxed{115}$

3. If
$$92 + 66 = 158$$
, then $158 \boxed{92} = 66$

4. If
$$77 + 93 = 170$$
, then $170 - \boxed{77} = 93$



Tick (✓) the correct answer.

- 1. 100 less than 765 is
 - a. 565

b. 665

865

- 76 29 =
 - a. 47

b. 49

- 57 c.
- Rahul has 200 cards. He gave 125 to his sister. How many cards are left with him? b. 75
- One hundred sixty-five minus one hundred is:
 - a. 65

✓ b. 85

75 c.

C.

85

NEP Cross Cultural Learning

Do it yourself.

Worksheet

23	137	279	80	192	317	412	208	125	100
А	Е	L	М	N	О	Р	R	S	Т





Solve the following sums and decode the messages as per the code given in the box. write the message in the tree.

	H 5	T 3	O 5	
_	1	2	3	
$\overline{\mathbf{P}}$	4	1	2	

Chapter

Multiplication

Roll Back



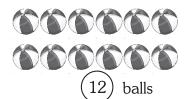








balls



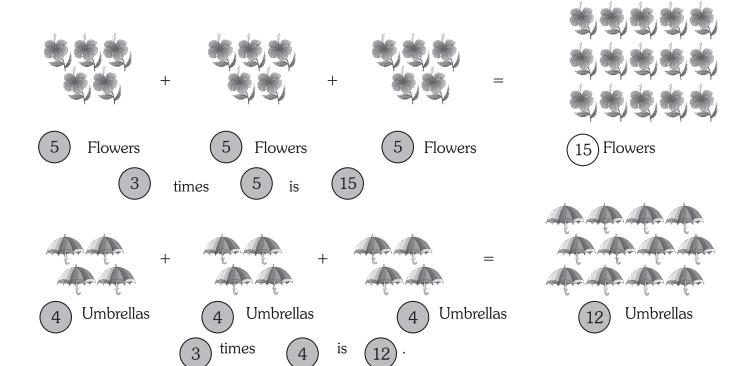
balls



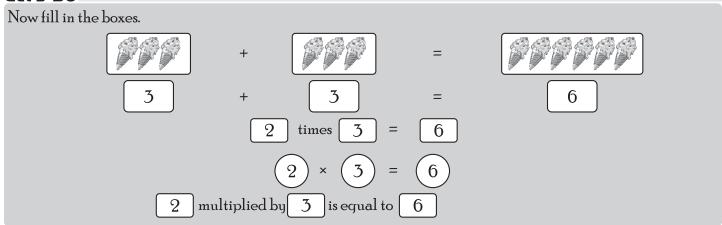


balls

times is.

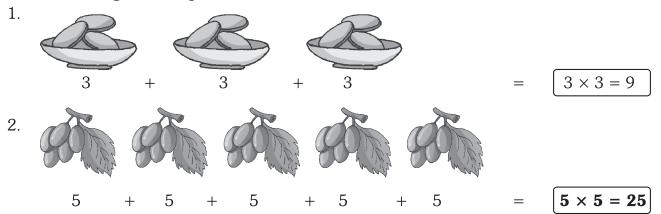


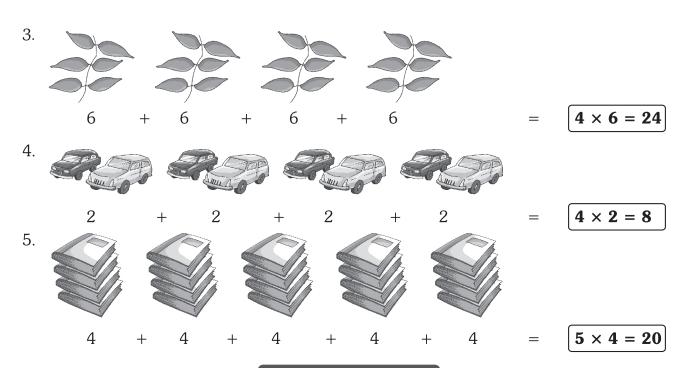
Let's Do



Exercise 5.1

Write the following as multiplication statements:





Multiplication Table

Table of 1.

Count the balls and build the table of 1:

	$1 \times 1 = 1$
	$2 \times 1 = 2$
	$3 \times 1 = 3$
	$4\times 1=4$
	$5\times 1=5$
000000	6 × 1 = 6
000000	$7\times 1=7$
0000000	8 × 1 = 8
00000000	9 × 1 = 9
000000000	10 ×1 = 10

Table of 1.

Count the apples and build the table of 2:

	$1 \times 2 = 2$
	$2 \times 2 = 4$
	$3 \times 2 = 6$
	$4 \times 2 = 8$
***	$5 \times 2 = 10$
***	6 × 2 = 12
****	$7 \times 2 = 14$
****	8 × 2 = 16
****	9 × 2 = 18
	10 ×2 = 20

Exercise 5.2

A. Write the product of the following.

1.
$$2 \times 5 = 10$$
 2. 9

$$2. 9 \times 2 = 18$$

3.
$$6 \times 2 = 12$$

$$4. \quad 7 \times 5 \quad = \quad \mathbf{35}$$

5.
$$4 \times 10 = 40$$

6.
$$5 \times 5 = 25$$

7.
$$10 \times 10 = 100$$
 8.

8.
$$3 \times 10 = 30$$

9.
$$8 \times 2 = 16$$

10.
$$7 \times 2 = 14$$

B. Complete the following.

- 7 + 7 + 7 + 7 + 7 + 7
- 2. 4 + 4 + 4 + 4
- 3. 2 + 2 + 2 + 2 + 2 + 2
- 9 + 9 + 94.
- 5. 10 + 10 + 10 + 10 + 10
- 6. 5 + 5 + 5 + 5 + 5 + 5
- 2 + 2 + 2 + 2 + 2 + 2 + 2 + 27.
- 6 + 6 + 6
- 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8
- 10. 3 + 3 + 3

- 6×7 42
- 4×4 **16**
 - 6 × 2 **12**
 - 3×9 27
 - 5×10 **50** =
 - 6×5 **30** =
- =
- 8 × 2 16
- 3×6 18
- 8 × 8 64
- 3×3 9 =

Tricky Maths

Write Tfor true or Ffor false:

7 times 5 is 35.

Let's Do

 $3 \times 0 = \bigcirc$

- T
- 4 groups of 10 is 14.
- F
- $2+2+2+2=4\times2$
- T T

- 8 multiplied by 2 is 18.
- F

 $4 \times 1 = 4$

 $0 \times 2 = 2$

 $5 \times 6 = 6 \times 5$

- E

 $1 \times 5 = \boxed{5}$

 $10 \times 10 = 100$

 $9 \times 5 = 5 \times 9$

Tricky Maths

4 cars have 16 wheels

2girls have 2 nose.

6boys have 12 ears.

3 hands have 15 finger

5 cowshave 20 legs

4 tricycles have 12 wheels

Exercise 5.3

 $0 \times 8 = \bigcirc$

Fill in the blanks:

1.



0 0 0

0

 $4 \times 0 = 0$

2.



+1



1



1



1

+

 $5 \times 1 = 5$

3.



2 + 2 + 2

 $3 \times 2 = 6$

That is $3 \times 2 = 2 \times 3$





3 + 3

 $2 \times 3 = 6$

B. Use multiplication properties and fill in the blanks:

1.
$$6 \times 0 = 0$$

4.
$$0 \times 5 = 0$$

2.
$$3 \times 1 = 3$$

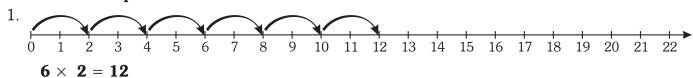
5.
$$6 \times 9 = 9 \times 6$$

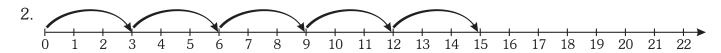
3.
$$1 \times 4 = 4$$

6.
$$7 \times 3 = 3 \times 7$$

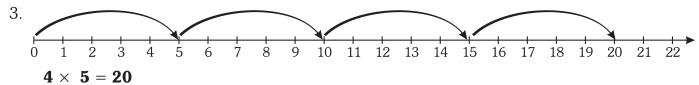
Exercise 5.4

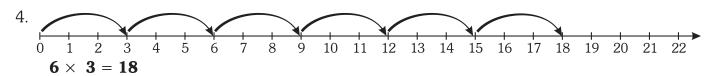
A. Write the multiplication fact for each number line.





$$\mathbf{5} \times \mathbf{3} = \mathbf{15}$$





Exercise 5.5

A. Use your tables to multiply.

Let's Do

Multiply:

	T	O	
	×	2	
Г	2	8	

Exercise 5.6

A. Find the product:

1. 4. 5. 6. 2. 3. 7. 8. TO T O TO TO T O T O T O T O 2 2 3 3 4 3 1 2 4 4 8 5 1 0 4 1 \times 4 × 6 \times 3 \times 2 \times 2 \times 4 \times 2 \times 1 9 8 8 6 0 9 8 6 8 8 4 8 8 2 8 5

B. Multiply:

2. 3. 5. 1. 4. TO 6. TO TO TO TO T O 3 3 3 0 4 2 1 0 3 4 2 2 \times 2 \times 2 × 5 \times 2 \times 2 \times 1 **5 0** 6 6 3 0 6 8 4 4 8 4 7. 9. 8. 10. 11. 12. TO T O TO T O TO TO 3 3 2 1 3 1 2 0 4 1 × 4 \times 3 \times 3 × 5 × 2 X 12 6 99 10 5 6 2 4 0 16 4

Let's Do

Find the product:

$$123 \times 2 = 246$$

$$314 \times 1 = 314$$

$$202 \times 3 = 606$$

Exercise 5.7

A. Subtract:

- 2. 1. 3. 4. н т о H T 0 HT 0 H T 0 2 3 2 3 3 4 3 2 3 1 1 1 2 3 3 2 × X X X 3 9 9 6 4 4 6 6
- 5. 6. 7. 8. 0 НТ 0 HT 0 Н T HT 0 2 2 4 2 3 1 3 4 1 1 1 4 2 2 5 X X X X 8 4 8 8 4 4 6 5 5 6 8 5
- 9. н т H T 0 0 HT 12. 0 10. 11. 3 7 0 4 1 0 1 2 9 X 3 X X 1 2 9 0 9 4 7 2 9 0 9 2 8

Multiply the following: 1. 2. 3. 4. Н TO НТ 0 0 HT HT 0 1 2 3 2 3 2 1 1 1 3 2 0 3 3 2 X X 5 5 6 3 6 9 6 9 4

6.

Let's Do

Multiply:

4.

9.

Exercise 5.8

3.

8.

B. Multiply

1.
$$\mathbf{H} \quad \mathbf{T_{0}} \quad \mathbf{O} \\ 3 \quad 8 \\ \times \quad 2 \\ \hline \mathbf{7} \quad \mathbf{6}$$

2.

7.

12.

17.

H
$$T_{4}$$
 O 1 8 \times 5 9 0

6. **H**
$$\mathbf{T}_{4^{\overset{\circ}{1}}6}$$
 O \times 2 **9** 2

H
$$T_{1}^{0}_{2}$$
 × 6

11. **H**
$$\begin{array}{ccccc} \mathbf{H} & \mathbf{T} & \mathbf{O} \\ & 7 & 0 \\ & \times & 4 \\ \hline \mathbf{2} & \mathbf{8} & \mathbf{0} \\ \end{array}$$

$$\begin{array}{cccc} \mathbf{H} & \mathbf{T}_{3} & \mathbf{O} \\ & 1^{3} & 9 \\ & \times & 4 \\ \hline & \mathbf{7} & \mathbf{6} \\ \end{array}$$

19. **H**
$$T_{2}$$
 O 4^{2} 4 \times 7 **3 0 8**

20. **H**
$$T_{6}$$
 O 3^{6} 7 \times 9 **3 3 3**

Let's Do

Find the product:

$$\begin{array}{cccc} \mathbf{H} & \mathbf{T} & \mathbf{O} \\ 1 & 1^{(1)} 2 \\ & \times & 6 \\ \hline \mathbf{6} & \mathbf{7} & \mathbf{2} \end{array}$$

Exercise 5.9

Colour the smallest green and biggest red.

2.

 3. **H T O**1 0 4
× 5 **5 2 0**

4. $\begin{array}{ccccc}
 & \mathbf{H} & \mathbf{T} & \mathbf{O} \\
 & 2^{0} & 4^{0} & 4 \\
 & & \times & 3 \\
\hline
 & \mathbf{7} & \mathbf{3} & \mathbf{2}
\end{array}$

7. $\begin{array}{ccccc}
 & \mathbf{H} & \mathbf{T} & \mathbf{O} \\
 & 2^{2} & 5^{2} & 5 \\
 & \times & 4 \\
 & \mathbf{10} & \mathbf{2} & \mathbf{0}
\end{array}$

8. **H T O** $1^{(1)} 2^{(2)} 5$ $\times 5$ **6 2 5**

9. **H T O**1 0 7
× 7 **7 4 9**

10. **H T O** $1^{(1)}2^{(2)}3$ $\times 8$ **9 8 4**

11. **H T O**1 0 5
× 9

9 4 5

12. $\begin{array}{cccc} \mathbf{H} & \mathbf{T} & \mathbf{O} \\ 1^2 & 3^3 & 6 \\ & \times & 6 \\ \hline & \mathbf{8} & \mathbf{1} & \mathbf{6} \end{array}$

B. Find the product.

1. **H T O** 1^{3} 7 0 \times 5 **8 5 0**

2. **H T O**2¹ 4 2
× 4 **9 6 8**

3. **H T O**2 1² 8
× 3 **6 5 4**

4. **H T O**3 2¹ 7
× 2

6 5 4

8.

5. $\begin{array}{ccccc}
\mathbf{H} & \mathbf{T} & \mathbf{O} \\
2^{\circ} & 4 & 2 \\
& \times & 3 \\
\hline
\mathbf{7} & \mathbf{2} & \mathbf{6}
\end{array}$

 H T O 3 1⁰ 6 × 3 9 4 8

Exercise 5.10

A. Solve the following story sums:

1. There are 12 children. Each child ate 5 biscuits. How many biscuits were eaten in all?

Number of children = 12Biscuits eaten by each child = 5

∴ Total biscuits eaten $= 12 \times 5 = 60$

6.



Answer: 60 Biscuits were eaten in all.

2. There are 64 eggs in a carton. How many eggs are there in 9 cartons?

Number of eggs in a carton = 64

 \therefore Number of eggs in 9 cartons = 64×9 = 576 H T O 6³4 × 9

 $\textbf{Answer:} \ \text{There are 576 eggs in 9 cartons.}$



3. A milkman sells milk in 4 lanes every day. Each lane has 124 houses. How many houses does he sell milk to every day?

Number of houses in each lane = 124

 \therefore Number of houses in 4 lanes = $124 \times 4 = 496$

Answer: The milkman sells milk in 496 houses every day.



4. Ali has 112 marbles. Shyam has 3 times the number of marbles that Ali has. How many marbles does Shyam have?

Ali has marbles = 112

∴ Shyam has marbles $= 3 \times 112 = 336$

Answer: Shyam has 336 marbles.



5. A group of people hired 6 buses to go on a tour. Each bus carried 105 people. How many people went on the tour?

A bus carried people = 105

 \therefore 6 buses carries people = $105 \times 6 = 630$

Answer: 630 people went on the tour.



Tick (✓) the correct answer.

- 1. 0 × 14 = ____
 - a. 0
- ✓ b. 14
- c. none of these

- 2. 6+6+6+6 can also be written as:
 - a. 4×6
- \checkmark b. 6×4
- c. 6+4

1 2 4

9

 \times 4

1 2

X

3 6

- 3. '5 groups of 3' can be written as:
 - a. 15

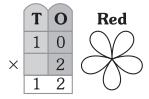
- b. 18
- c. 12
- 4. How many zeros are there after 6 in 60×10 ?
 - a. 1

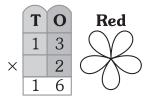
) b. 2

✓ c. 3

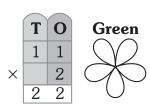
NEP SDGs for Qualitative Education

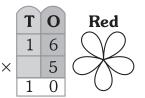
Colour the flower green if the answer is correct. Colour the flower red if the answer is not correct.





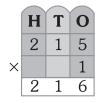
$$\times$$
 $\begin{bmatrix} \mathbf{T} & \mathbf{O} \\ & 7 \\ & 2 \\ & 1 & 4 \end{bmatrix}$ Green





	H	T	0
	1	3	5
×			5
	6	7	5







	H	T	0
	1	1	0
×			6
	6	6	0



Chapter



Division

A. Distribute the apples in the baskets.

1. Use 12 apples

12 shared equaly by 3 is **4**.

$$12 \div 3 = 4$$
.

Each basket will have 4 apples.

2. Use 10 apples

10 shared equally by 5 is **2**.

$$10 \div 5 = 2$$

Each basket will have 2 apples.

3. Use 16 apples

16 shared equally by 4 is **4**.

$$16 \div 4 = 4$$

Each basket will have **4** apples.







Let's Do

Divide the following by repeated subtraction.

a. 12 books among 3 children

$$12 - 3 = (9) 1 \text{ time}$$

$$9 - 3 = 6$$
 2 times

$$\overset{\bullet}{6}$$
 - 3 = $\overset{\bullet}{3}$ 3 times

$$(3) - 3 = (0)$$
 4 times

$$S_0, 12 \div 3 = 4$$

b. 20 pencils among 5 children

$$20 - 5 = 15$$
 1 time

$$(15)$$
 -5 $=$ (10) 2 times

$$(10)$$
 – 5= (5) 3 times

$$(5)$$
 - $5 = (0)$ 4 times

$$S_0, 20 \div 5 = 4$$

Exercise 6.1

A. Divide using repeated subtraction:

1. 27 flowers among 9 girls

$$27 - 9 = 18$$
 1
 $18 - 9 = 9$ 2
 $9 - 9 = 0$ 3
 $27 \div 9 = 3$

2. 28 chocolates among 7 children

$$28-7=21$$
 (1)
 $21-7=14$ (2)
 $14-7=7$ (3)
 $7-7=0$ (4)
 $28 \div 7=4$

3. 24 mangoes among 4 children

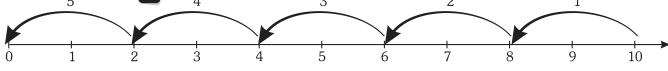
$$24-4=20$$
 1
 $20-4=16$ 2
 $16-4=12$ 3
 $12-4=8$ 4
 $8-4=4$ 5
 $4-4=0$ 6
 $24 \div 4=6$

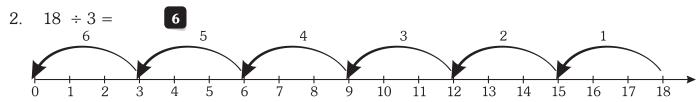
4. 12 birds on 2 branches

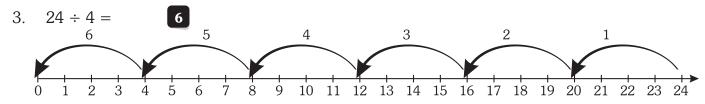
Exercise 6.2

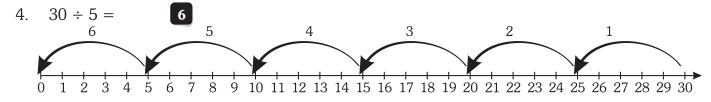
A. Divide the following using the number line.











Let's Do

Fill in:

Multiplication fact



4 threes are $4 \times 3 = 12$.

Division fact



4 equal groups give 3 pencils in each. $12 \div 4 = 3$.

12 pencils divided into

Division fact

12 pencils divided into 3 equal groups give 4 pencils in each $12 \div 3 = 4$.

Exercise 6.3

Write two division facts for each multiplication fact.

1.
$$4 \times 3 = 12$$

$$\boxed{12} \div \boxed{3} = \boxed{4}$$

$$\boxed{\mathbf{12}}\div\boxed{\mathbf{4}}=\boxed{\mathbf{3}}$$

2.
$$7 \times 4 = 28$$

$$28 \div 4 = 7$$

$$\boxed{12} \div \boxed{4} = \boxed{3}$$

2.
$$7 \times 4 = 28$$

$$28 \div 7 = 4$$

3.
$$6 \times 5 = 30$$

4.
$$6 \times 7 = 42$$

$$\boxed{42} \div \boxed{7} = \boxed{6}$$

$$\boxed{\mathbf{30}} \div \boxed{\mathbf{6}} = \boxed{\mathbf{5}}$$

4.
$$6 \times 7 = 42$$

$$\boxed{42} \div \boxed{6} = \boxed{7}$$

5.
$$4 \times 8 = 32$$

6.
$$9 \times 5 = 45$$

$$(45) \div (5) = (9)$$

1.
$$18 \div 6 = 3$$

$$\boxed{3}\times \boxed{6}=\boxed{18}$$

2.
$$27 \div 9 = 3$$

$$(3) \times (9) = (27)$$

3.
$$21 \div 7 = 3$$

$$(3) \times (7) = (21)$$

4.
$$45 \div 5 = 9$$

$$9 \times 5 = 45$$

5.
$$20 \div 5 = 4$$

$$\boxed{4}\times\boxed{5}=\boxed{20}$$

6.
$$72 \div 8 = 9$$

$$9 \times 8 = 72$$

7.
$$6 \div 6 = 1$$

$$1 \times 6 = 6$$

8.
$$0 \div 6 = 0$$

$$\bigcirc \times \bigcirc = \bigcirc$$

Exercise 6.4

Fill in the blanks.

$$1. \quad 5 \div 5 \qquad = \boxed{1}$$

$$2. 9 \div 1 =$$

$$3. \quad 4 \div 1 = 4$$

4.
$$0 \div 10 = 0$$

$$5. 8 \div 8 =$$

6.
$$10 \div 1 = 10$$



Fill the missing number:





Exercise 6.5

Complete the blanks.

1. Write
$$24 \div 6 = 4$$
 6 24 in the long form. -24 00

2. Write
$$7 \overline{\smash{\big)}\ 35}$$
 in short form.
$$\underline{-35} \overline{}$$

$$\underline{35} \div 7 = 5$$

B. Divide the following using long division.

1.

$$45 \div 5$$

$$9$$

$$5) 45$$

$$-45$$

$$0$$

$$0$$
Quotient = 9

2.

$$48 \div 8$$

$$8) 48$$

$$-48$$

$$0$$
Quotient = 6

3.

4.

$$36 \div 4$$

$$9$$

$$4)36$$

$$-36$$

$$0$$
Quotient = 9

5.

$$63 \div 7$$

$$7) 63$$

$$-63$$

$$0$$

$$0$$
Quotient = 9

6.

$$54 \div 9$$

$$9) 54$$

$$-54$$

$$0$$

$$0$$
Quotient = 6

Exercise 6.6

Solve the following story sums.

32 apples have to be put in 4 boxes. How many apples will be there in each box?

Answer: There are 8 apple in each box.



$$\begin{array}{r}
 8 \\
4 \overline{\smash{\big)}\ 32} \\
 -32 \\
 \hline
 0
\end{array}$$

2. 63 books are to be distributed equally among 9 children. How many books will each child get?

Answer: 7 books will each child get.



$$\begin{array}{r}
7\\9{\overline{\smash{\big)}}} 63\\ \underline{-63}\\0\end{array}$$

3. 60 flowers have to be put in 10 vases. How many flowers should be put in each vase?

Answer: 6 flowers should be put in each vase.



4. A carton of cola contains 6 bottles. How many cartons are needed for 42 bottles?

Answer: 7 cartons are needed for 42 bottles.



 $6)\frac{7}{42}$ -42 0

5. Mohit spent ₹ 50 to buy some chocolates. If he bought 5 chocolates in total, what is the cost of one chocolate?

Answer: cost of one chocolate is ₹ 10.





Tick (✓) the correct answer.

- 1. Sign of division is
 - Olgir of division is
- b. ×

-) c. ÷
- **(/**)

- 2. is equal sharing and equal grouping.
 - a. Multiplication
- b. Division
- c. Addition

- 3. Dividend \div ____ = Quotient
 - a. Divisor
- b. quotient
- c. none of these

- 4. In $16 \div 2 = 8$, quotient is:
 - a. 16

b. 2

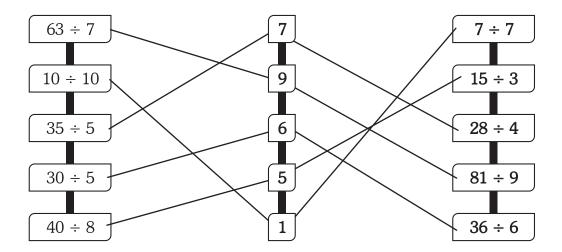
c. 8

- 5. $0 \div 9 = _{__}$
 - a. 0

b. 9

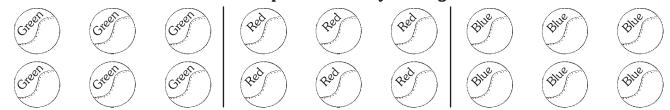
c. 1

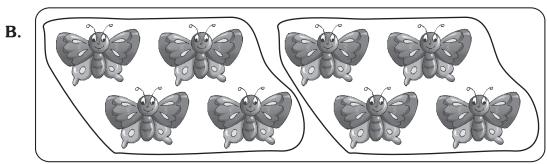
NEP Adaptive Education



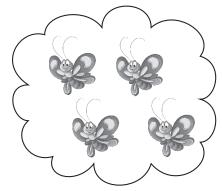
Worksheet

A. Colour green the balls that can be put in Bhuvneshwar's bag.Colour red the balls that can be put in Zaheer's bag.Colour blue the balls that can be put in Harbhajan's bag.





Draw an equal number of butterfly in the clouds given below and colour them.





Chapter

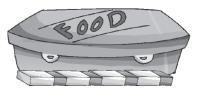


Measurement

Roll Back

A. How long:

1.



4 Erasers

2.



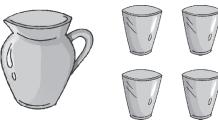
5 Crayons

3.



6 sharpners

Tick $(\ensuremath{\checkmark})$ the heavier object and (x) the lighter one : 1. 3. X X C. How much water does this jug hold? 2.



4 glasses

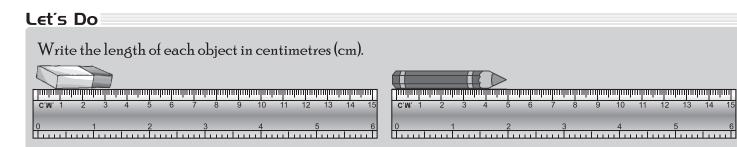
 $E_{raser} = 3_{cm}$







Pencil = $5 \, \text{cm}$



Exercise 7.1

Tick $(\ensuremath{\checkmark})$ the correct unit. Which standard unit will you use to measure.

1.	the height of a		?	m	✓	cm	
2.	the length of your		laces?	m		cm	✓
3.	the length of your		?	m		cm	✓
4.	the length of a	8	?	m		cm	✓
5.	the height of your	量	?	m	✓	cm	

Write m or cm depending on whether the length is long or short.

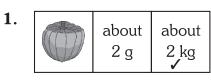
***	ite in or cin acpending on t	viiether the i	cugui	is folig of short.	
1.	The length of a table	m ,	2.	The length of a pin	/cm /
3.	The length of a book	cm	4.	The height of a door	m
5.	The length of a comb	cm	6.	The length of a pen	cm

Exercise 7.2

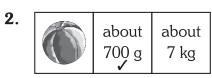
A. Choose and tick (\checkmark) the correct unit to measure.

Object	g	Kg	Object	g	Kg
1	✓		RICE		√
A		1		√	
(000)	✓				√

B. What is the weight (approximately) of each? Tick (\checkmark) the correct option.











3.

6.

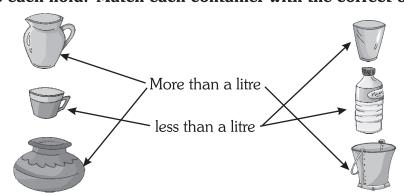
about 20 g	about 20 kg

Exercise 7.3

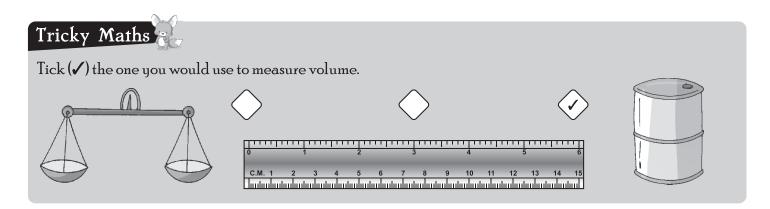
A. Choose and tick (/) the correct unit to measure the capacity of :

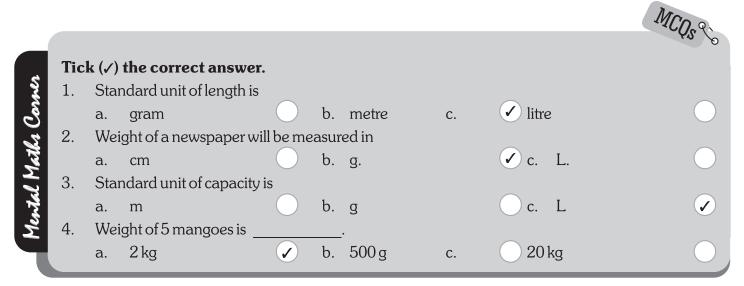
Object	L	mL	Object	L	mL
		√		✓	
	1		MILK	√	
		1	FRUT		✓

B. How much does each hold? Match each container with the correct box.



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NEP Life Skills

Tick (\checkmark) the unit you will use to measure.

The weight of a balloon.



A boy's weight.

m
kg
L



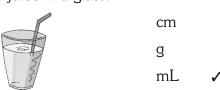
The length of a ribbon.

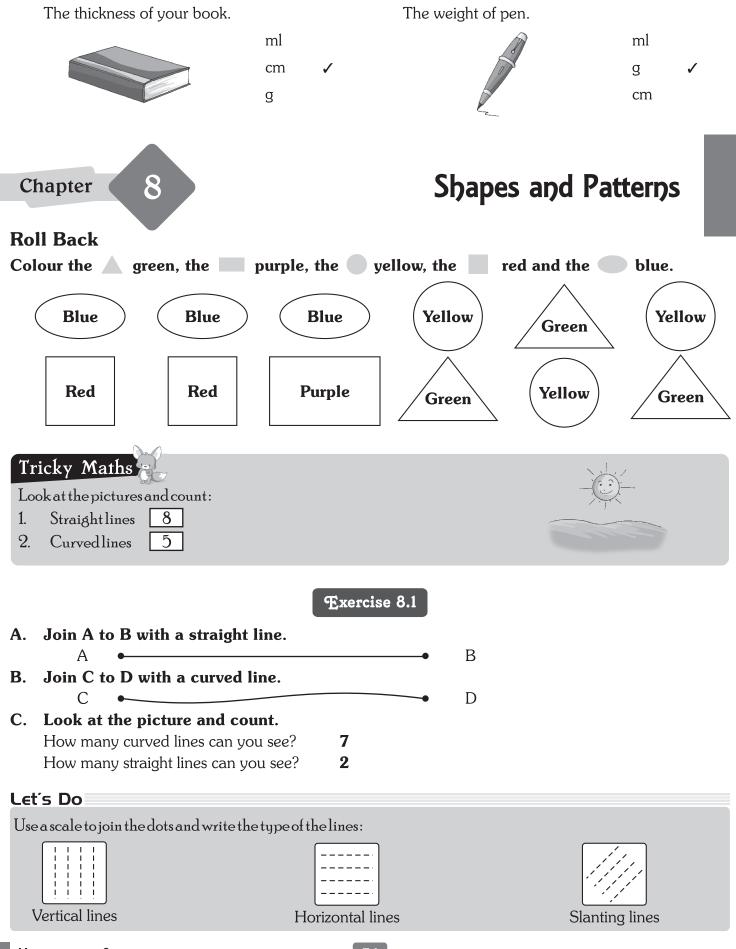


The height of the Qutub Minar.



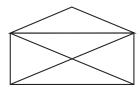
Quantity of juice in a glass.





Exercise 8.2

A. Count the lines and write the number in the given box.



Horizontal lines

2

Vertical lines

2

Slanting lines

4

B. Draw straight lines between the dots of the same colour.







Exercise 8.3

Write the number of sides and corners for each figure.

1.



Sides 3

Corners 3

2.



Sides 4

Corners 4

3.



Sides 4

Corners 4

4.



Sides 0

Corners 0

5.



Sides 0

Corners 0

6.



Sides 3

Corners 3

Let's Do

Now try rolling or sliding the following objects. Tick () the objects that roll. Put a cross () against the objects that slide. Circle the ones that can both roll and slide.



















Write the name of the shape of each and tick $(\ensuremath{\checkmark})$ the right answer for each object.

Object

Name of the shapes







Slide /

Both /







Roll /

Roll /

Slide //

Both





Roll / 🗸

Slide /

Both



Colour the cube green, the cuboid blue, the cone yellow, the cylinder red and sphere purple.

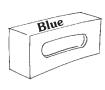












Complete the table.

Object	Shape	Edges	Faces	Vertices
Ely. 1	Cube	12	6	8
	Cone	1	2	1
	Cylinder	2	3	0
	Cuboid	12	6	8

Exercise 8.5

Complete the patterns. Complete the patterns.









































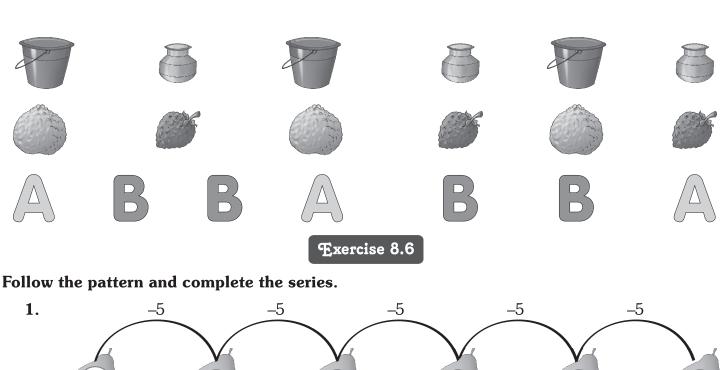


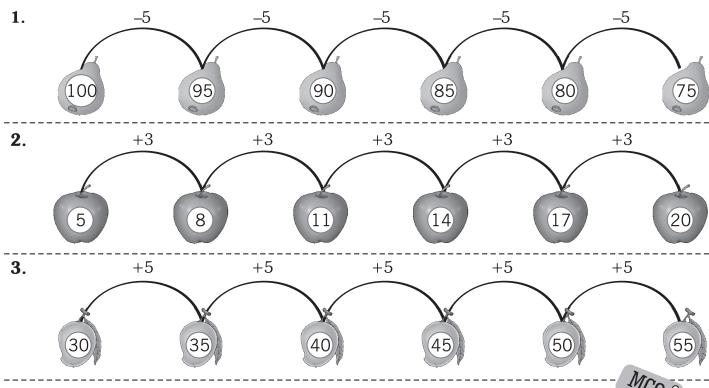


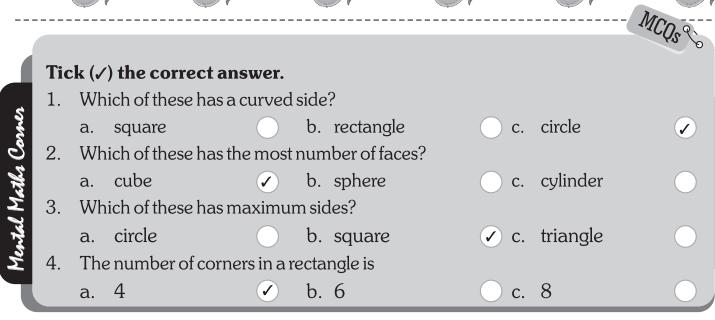






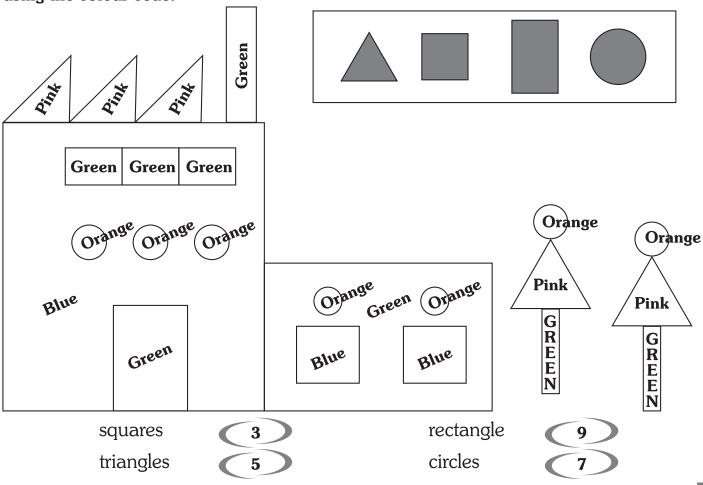








Look at the following figure carefully and count the number of shapes. colour the figure using the colour code.

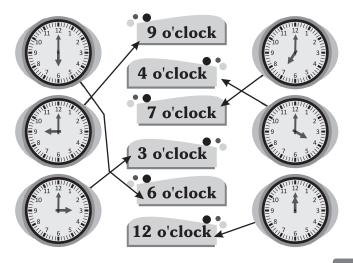


Chapter

Roll Back

A. Match the time with correct watch.

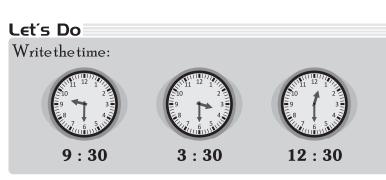
9



Time and Calendar

B. Draw the hands of the clock to show the time:

Do it yourself.



Exercise 9.1

A. Fill in the blanks.

1.



2.



3.



Hour hand between **4** and **5**.

Minute hand on **6**. Read it as **half past 4**. Write it as **4 : 30**. Hour hand between 12 and 1 but near **12**.

Minute hand on **3**. Read it as **quarter past 12**.

Write it as **12:15**.

Hour hand between 6 and 7 but near 7.
Minute hand on 9.
Read it as quarter to 7.

Write it as **6** : **45**.

B. Write the correct time shown by the clocks.

1.



7:15

quarter past 7

2.

9:45

quater to 10



1:30

half past 1



3:30

half past 3



8:30 half past 8



12:45 quater to 1



6:00 6 o'clock



12:15 quater past 12

C. Draw the hands to show the time given in the box.

1.



half past 3



Quarter to 7

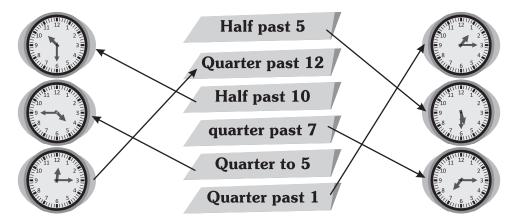


Quarter past 5



half past 9

D. Match the time with the clock.





What time does the clock show? Fill in the blanks with 'before' or 'after'.



After half past 2



After halfpast9



Before halfpast2

Exercise 9.2

Fill in the blanks.

- 1. The first day of the week is **Monday**.
- 2. After Friday comes **Saturday**.
- 3. The seventh day of the week is **Sunday**.
- **Wednesday** is the third day of the week. 4.
- 5. **Saturday** is the sixth day of the week.
- **Sunday** comes after Saturday.

B. Answer the questions.

Do it yourself.

Fill in the blanks and enjoy this poem.

M for **Monday**, turn around,

T for **Tuesday**, touch the ground,

W for **Wednesday**, jump so high,

T for **Thursday**, touch the sky,

F for **Friday**, say hooray!

S for **Saturday**, time to play,

S for **Sunday**, clap your hands,

It's time to start all over again!

Exercise 9.3

2.

Α. 1. How many months have exactly 30 days? Write their names.

April



September **November**

How many months have 31 days? Write their names.

January July

March August

May October

Answer these questions.

- How many days are there in the month of June? **30 days** 2.
- Which is the month after August? **September** 3. Which is the month after November? **December**
- 4. Which is the fourth month of the year? **April**
- 5. If this month is January, what was the last month? **December**

Exercise 9.4

Fill in the blanks.

- 1. The year begins with the **Shishir** ritu.
- 2. The year ends with the **Hemant** ritu.
- 3. In July and August it is the **Varsha** ritu.
- 4. In March and April it is the **Vasant** ritu.
- After Vasant comes the **Grishma** ritu.
- Before Hemant comes the **Sharad** ritu. 6.
- 7. My birthday is in the ritu. **Do yourself**

December

	MCQs?
	Ü
30:7	
7:45	
Saturday	✓

c.

✓) c.

July

NEP Computational and Analytical Thinking

The sixth month of the year is

Tick (✓) the correct answer.

7:03

6:45

a. Monday

May

Half past 7 is written as:

Quarter to 7 is equal to:

The day that comes after the Friday is

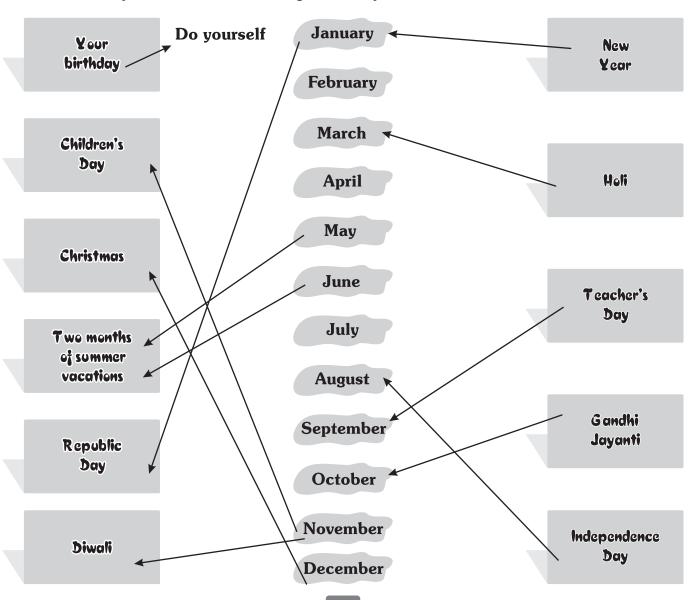
Each month of the year has one or more important days. Match the events to the correct month.

b. 7:30

b. 5:45

b. June

b. Thursday



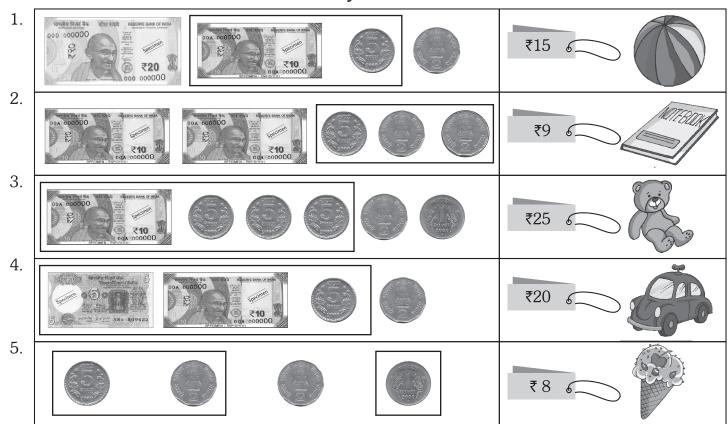
Money

Roll Back

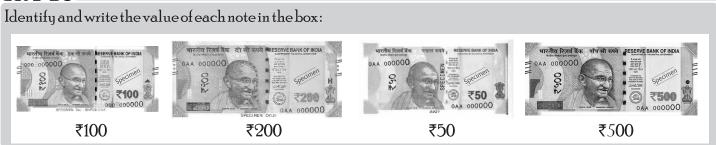
A. Identify the notes and coins and write the amount:



B. Circle the notes and coins needed to buy:

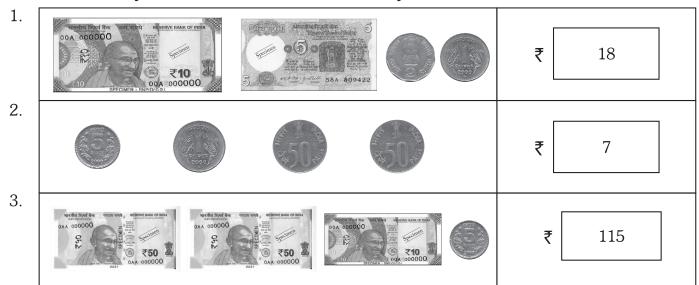


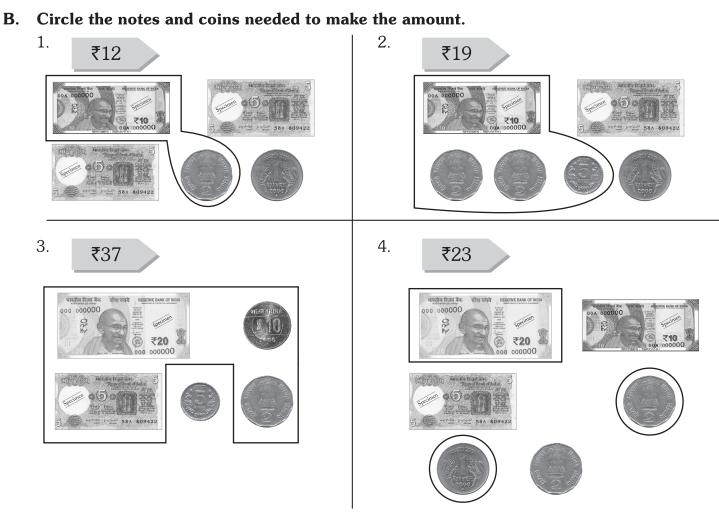
Let's Do



Exercise 10.1

A. Count the money. The first one has been done for you.





83 MATHEMATICS-2

Let's Do





is written as ₹5.50.









is written as ₹15.75.

Exercise 10.2

Write in short with the dot.

1. 6 rupees 25 paise =
$$₹6.25$$

2. 8 rupees 40 paise = $₹8.40$

=

What does it mean? B.

1.
$$₹ 8.35$$
 = 8 rupees 35 paise

$$3.$$
 ₹ 16.40 = 16 rupees 40 paise

$$5.$$
 ₹ 50.50 = 50 rupees 50 paise

Let's Do

Add the following rupees and paise:

Exercise 10.3

Add the following rupees and paise.

1.
$${}_{0} \stackrel{?}{=} {}_{0} \stackrel{\mathbf{P}}{=} 25$$
 25 + 25 25 **50 50**

Answer: ₹ **50.50**

Answer: **₹59.50**

B. Add.

Answer: ₹ **35.70**

Answer: ₹ **94.08**

Answer: ₹ 72.60

Let's Do

Subtract the following:

Exercise 10.4

A. Subtract the following.

1. P 98 75 -450.0 53 7 5 2. 76 50 -4600 30 50 3. P 68 0.0 -2125 75 46

Answer: ₹ 53.75

Answer: ₹ 30.50

Answer: ₹46.75

B. **Subtract:**

1. ₹ 66.00 ₹ 55.10 10.90 2. ₹ 35.75 ₹ 14.55 21.20

3. ₹ 77.50 -₹ 65.35 ₹ **12.15**

Answer: ₹10.90

Answer : ₹21.20

Answer: ₹12.15

Let's Do

Add and find the total cost of: Howmuch do I get back if:

P

₹ 15 1 ball 00 1 Icecream + 2500 00 total cost **40**

I give total cost I get back

1 Fanta 1 candle total cost

1 give total cost I get back

Exercise 10.5

Rahul bought a football and a tiffin box. How much did he spend? 1.

Answer: Rahul spent ₹ 39.00.

₹20.50 + ₹ 18.50 ₹39.00

2. Aman bought a toy car and a kite. How much did he spend?

Answer: Aman spent ₹ 22.25.

₹20.25 +₹ 2.00 **₹22.25**

3. Vini had ₹ 50.00. She bought an ice-cream. How much money does she had left?

Answer: Vini had left ₹ 35.00.

₹50.00 **-**₹15.00 ₹35.00

Somya bought a milk bottle, an ice-cream and a bag. How much money did she 4. spend in all?

Answer : **Sonya spent** ₹ **90.00**.

₹ 40.00 ₹ 15.00 ₹ 35.00 ₹ **90.00**

5. Prakhar had ₹55.00. He bought a kite, and a football. How much money does he had left?

Answer: Prakhar had left ₹ 32.50

₹ 2.00 +₹20.50 ₹22.50

₹55.00 -₹22.50 **₹32.50**

HOTS QUESTION

Mrs Khurana, Class Teacher of 2A, has asked the children to buy pencils and crayons for giving to children who cannot buy them. The class collects 20 pencils. Each pencil costs ₹5.

How much would 10 pencils cost?

Cost of 10 pencils is ₹50.

How much would 20 pencils cost?

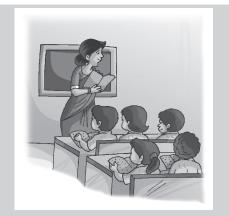
Cost of 20 pencils is ₹100.

The class collects 15 crayons also.

They cost $\stackrel{?}{\sim}$ 90. Which would cost more – the crayons or the pencils?

The cost of 1 crayon = $₹90 \div 15 = ₹6$

The crayons cost are more than the pencils.



MCOs

Tick (\checkmark) the correct answer.

- 1. How many 50 paise coins are there in ₹2?
 - a. 10

b. 5

- C. 4

- 2. How many
- notes make ₹ 50. **v** b. 20
- C.

- a. 10
 - ₹ 14 + ₹ 16 = ____
- b. ₹ 20

c. ₹ 40

- 4. ₹25-₹ 12.75=_
 - a. ₹ 15.25

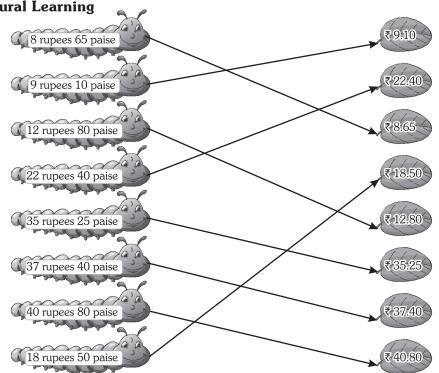
a. ₹30

- b. ₹ 16.25
- c. ₹ 12.25

30

✓

NEP Cross-Cultural Learning

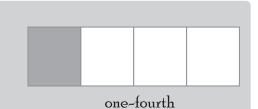


Let's Do





one – third



Exercise 11

A. Colour the shape that are divided into equal parts.

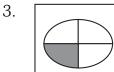
- 1.
- 2.
- 3.
- 5.
- 6.

Circle the correct fraction of the shaded part.



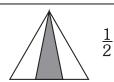


 $\frac{1}{3}$

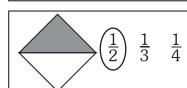


 $\frac{1}{2}$

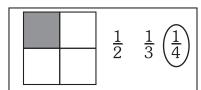
4.



- 5.



6.



Tick (✓) the correct answer.

- Which figure shows the fraction, one-third?

- One-fourth is written as:

- halves make a whole.
 - b. 2

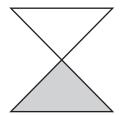
- c.

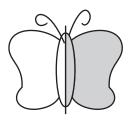
- make a whole. Three a. one-fourths
 - b. halves

- one-thirds

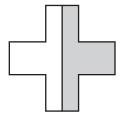


Join the dots of the other half. Colour it



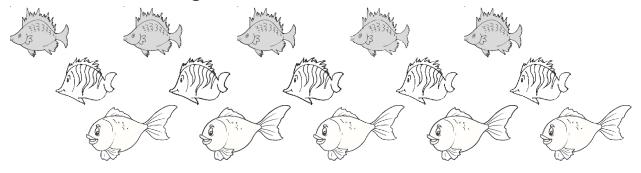








Colour one third of the following:



Chapter

12

Data Handling

Roll Back

A. Look at the picture and fill in the table :

	6. 20			
8	10	5	7	4

B. Write in capital letters the names of your teachers.

Do it yourself.

Let's Do

Look at these fresh fruits. Count and fill in the information in the following table.

Fruits					
Numbers	2	1	4	3	4

What is the total number of fruits in the basket?

14





Exercise 12

A. Birthday time for Mona's class! The table shows the number of boys and girls in Mona's class who have their birthdays in each month of the year. Write the missing numbers.

Months	Girls	Boys	Birthdays in all
January	1	2	3
February	5	2	7
March	1	1	2
April	4	2	6
May	0	4	4
June	3	3	6
July	0	2	2
August	1	4	5
September	2	3	5
October	2	0	2
November	6	1	7
December	4	5	9

Look at the birthday chart and answer the questions.

- 1. 2 boys celebrate their birthdays in January.
- 2. 3 girls celebrate their birthdays in June.
- 3. December has the most number of birthdays.
- 4. The Months of march, July and October have the least number of birthdays.

B. How do the children in Aneek's class come to school?

Means of transport →	S Acesaa			Bichcle
Numbers of children \longrightarrow	12	14	7	5

- 1. How many children come by bicycle? **5 children**.
- 2. How many more children come by bus than by car? **5 children**.
- 3. Least number of children come by **bicycle**.
- 4. Most number of children come by **foot.**

How many of each kind of vegetables do you see?

Vegetables			L. C.			
Number	10	11	17	18	7	10

HOTS QUESTION

There are 2 Tamarind trees.

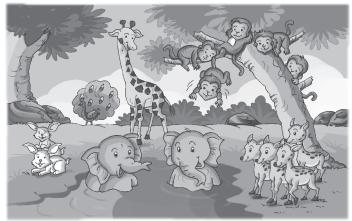
There are 3 Neem trees.

There are 4 Ashoka trees.

Tick (/) the correct answer. 1. How many flowers are there in the garden? a. 4 b. 5 c. 6 2. There are _____ butterflies in the garden. a. 3 b. 2 c. 1 3. How many boys are there. a. 1 b. 2 c. 3 4. How many trees are there. a. 1 b. 2 c. 3

NEP Multiple Intelligence

$Count \ the \ animals. \ Then \ colour \ that \ many \ boxes.$



(B)			
35			

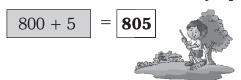
Chapter

1

Number beyond 999

Roll Back

A. Number of leaves raked by Iqbal



Number of leaves raked by Rohan



Number of leaves raked by Vidhya

$$700 + 60 + 5 = 765$$



Number of leaves raked by Diya



Numbers in descending order = 970,805,765,555.

В.

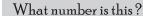


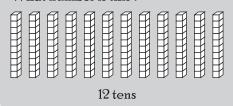






Tricky Maths



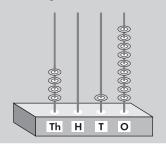




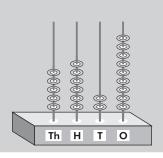
Let's Do

Show the following numbers on the abacus.

1. 4019



2. 5629

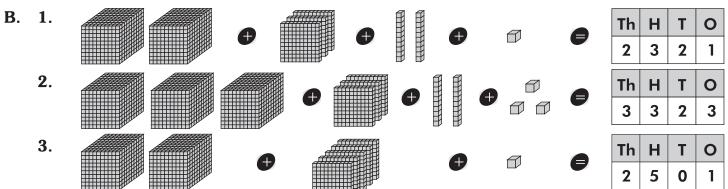


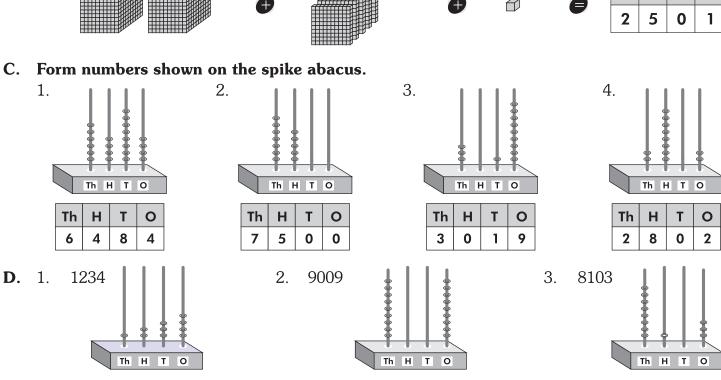
Exercise 1.1

1. 2845**2.** 7309**3.** 9098

2846 7310 **9099**

2847 7311 9100 2848 **7312** 9101 2849 7313 9102 2850 7314 9103

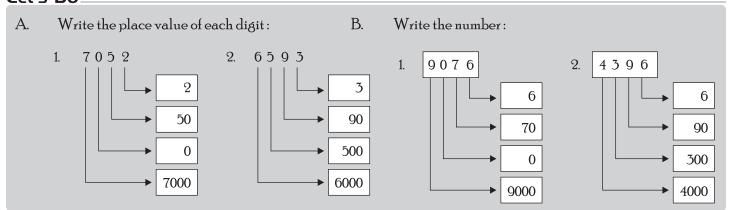




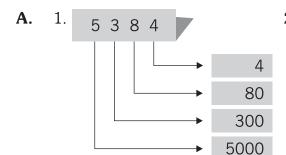
HOTS QUESTION

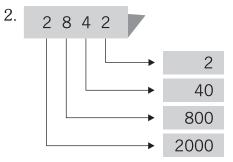
I am a 4-digit number. If my digits are reversed I became a 3-digit number. What is the digit in my ones place? Zero (0)

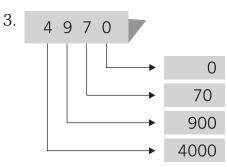
Let's Do

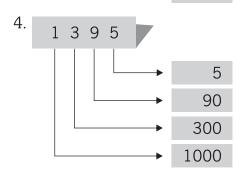


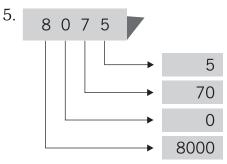
Exercise 1.2

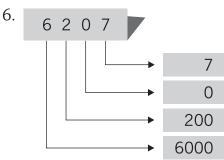


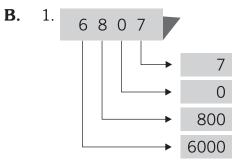


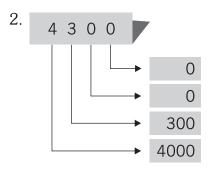


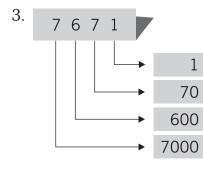












C. 1. 23**8**4 **80**

- 200 2. 3**2**43
- 3. 36**2**8
- **20**

Let's Do

Expand the following:

Exercise 1.3

4.

$$8000 + 300$$
 8300 $7000 + 7$ 7007

Tricky Maths

Find the number in which:

- tens place is 7. 1.
- 3. thousand place is 4 less than 10.

The number is

Th	Н	T	О
6	4	7	8

- ones place is 2 more than 6. 2.
- 4. hundreds place is between 3 and 5.

Let's Do

4.

Put the correct sign <, > or =.

230 < 2500

1213 > 369

- 2. 1729 < 3815
- 2681 < 7271 3.

5. 8000

4848 6.

- 7. 7540 < 7541
- 8. 4390 > 2390
- 9. < 1876 1874

4484



Do it yourself.

Exercise 1.4

8000

Compare and put > or < in the boxes.

- 1. 651
- 3057
- 3097
- 3. 3819
- 5640

- 4. 12
- 8914

2990

2462

- 5. 4893
- 3456
- 7200
- 6200

- 2670 7.
- < 2770
- 8. 7815
- > 1296
- 9. 5391
- 6391

- 10. 2384
- <
- 4673 11.
- < 4744
- 12. 6351
- > 6302

- В. 1. 7920
 - 7290 > 6364 > >
- 7280 > 7029
- 2. 9680
- > 8960
- > 6980
- 6890

3.

3.

5366

7255

- 3646 > 3466
- 2908 4.

8550

- > 2900
- > 2500
- 2008

- C. 1.
- 2000 < 4000
- 6000 < 6375 < 5517 <

2.

- < 9000
- 3259 < 3529
- < 3925

<

6150

< 9235 5085

Let's Do

Form the smallest and the greatest numbers.

- 0,2,1,7 : 1027

8235 <

- 7210
- 5,3,0,5 : 3055,
- 5530

2.

4.

3.

7310

- 7,0,5,9 : 5079
- 9750

Exercise 1.5

- 9999 A. 1. 2. 1000b.
- The smallest four digit number.
- The greatest four digit number.
- 3. 9876-C. 1023-4. d.
- The smallest four digit number using different digits.
- The greatest four digit number using different digits.

В. **Digits Greatest number** Smallest number 6, 3, 4, 2 1. 6432 2346 0, 8, 9, 1 9810 1089 3. 5, 4, 2, 8 8542 2458 4. 0, 6, 9, 7 9760 6079 1, 3, 7, 9 9731 1379 5.

- **C.** 1. 48 : **50**
- 2. 23 : **20**
- 3. 56 : **60**
- 4. 32 : **30**

- 5. 64 : **60**
- 6. 79 : **80**
- 7. 95 : **100**
- 8. 92 : **90**

- 9. 38 : **40**
- 10. 61 : **60**
- 11. 17 : **20**
- 12. 15 : **20**

L∈t´s Do≡

- A. Fill in the blanks.
 - 1. 17 = 10 + 7 = X + VII = XVII

2. 18 = 10 + 8 = X + VIII = XVIII

3. 19=10+9=X+IX=XIX

4. 20=10+10=X+X=XX

- B. Express in the Hindu-Arabic system.
 - 1. XVIII = <u>18</u>
- 2. XIV = 14
- 3. XX = 20
- 4. XXVI = 26

Exercise 1.6

- **A.** 1. 25 = XXV
- 2. 23 = XXIII
- 3. 36 = XXXVI
- 4. 19 = XIX
- 5. 30 = XXX

- 6. 18 = **XVIII**
- 7. 37 = XXXVII
- 8. 20 = XX
- 9. 32 = XXXII
- 10. 16 = XVI

- **B.** 1. XVII = **17**
- 2. XXVII = **27**
- 3. XXXIV = 34
- 4. XXXIX = 39
- 5. XXV = 25

- 6. XXX = 30
- 7. XIX = 19
- 8. XXVI = **26**
- 9. XII = **12**
- 10. XV = 15

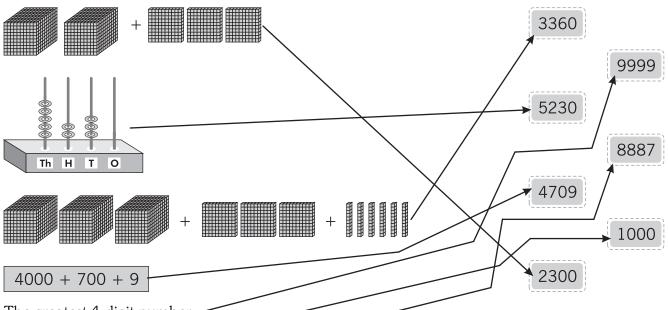
- **C.** 1. XVVII (X): (V cannot be repeated)
- IIII (✗): (I cannot be repeated 4 times)
 XXXV (✗): (35)
- 3. XXXXV (X): (X cannot be repeated 4 times)
 5. XIIII (X): (I cannot be repeated 4 times)
- 6. XV (✓) : (15)
- 7. VX (X): (V cannot be subtracted)
- 8. VVI (X): (V cannot be repeated)

Mental Maths Corner (MCQ's)

- 1. (b)
- 2. (d)
- 3. (b)
- 4. (a)
- 5. (b)

Worksheet

Match the following.



The greatest 4-digit number.

The smallest 4-digit number.-

The number comes before 8888.

Chapter

Addition

Roll Back

2.

- В. 1.
 - 495 + 354 2. **3**. 289 + 282
- C. 1.
- 1 0 0 0 4 0 5 0 0
- 2. 2 0 3 $\begin{bmatrix} 0 \end{bmatrix} \begin{bmatrix} 0 \end{bmatrix}$

4238

5

0

0

0

- 256 + 219 4.
- 3

		_		
5.		4	0	0
	+	1	0	0
		5	0	0

Exercise 2.1

2.

4.

- 412 A. 1. 412 + 0
 - **3**. 918 918 + 0

672 + 312

- **5**. 629 + 1 630
- **7**. 436 + 307 = 307 +

436

- 300
- 817 817 =1 301 =
- 6. 4237

0

- 1 +
- 8. 1739 **500** 500 + 1739

Let's Do

Add the following:

2. **Th H T O**8 0 1 5
+1 0 6 2 **9 0 7 7**

3. Th H T O
6 5 4 3
+2 1 0 0
8 6 4 3

Th H T O
4 1 1 5
+2 3 3 2
6 4 4 7

Exercise 2.2

A. 1. Th H T O

2 6 3 6

+3 3 5 1

5 9 8 7

6 8 9 7

2. Th H T O

1 7 6 1

+ 7 0 3 6

8 7 9 7

3. Th H T O
3 4 5 1
+2 3 2 0
5 7 7 1

4. Th H T O
9 2 5 1
+0 7 4 8
9 9 9 9

5. Th H T O
6 3 2 1
+2 4 6 7
8 7 8 8

6. Th H T O
3 2 7 3
+4 2 2 3
7 4 9 6

7. Th H T O
3 2 3 4
+2 3 4 1
5 5 7 5

8. Th H T O
3 2 5 4
+5 1 3 4

8 3 8 8

9. Th H T O
7 0 0 2
1 1 0 0
+1 0 5 6
9 1 5 8

B. 1. Th H T O
3 8 0 5
+ 2 0 7 3

5 8 7 8

2. Th H T O

1 2 3

+ 2 3 0 2

2 4 2 5

Let's Do

Add the following:

1. **Th H T O**

$$4^{\circ}8 \ 2^{\circ}3$$
+ 1 5 1 7

2. **Th H T O**

$$3^{\hat{1}}7^{\hat{1}}7^{\hat{1}}7$$

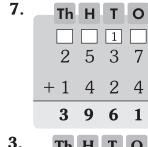
$$+1 \ 5 \ 5 \ 5$$
5 3 3 2

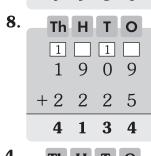
4. **Th H T O**

$$2^{(1)}4^{(1)}5^{(1)}9$$
+ 2 7 6 8
5 2 2 7

Exercise 2.3

6 3 4 0





4.	Th	Н	T	0
	1 5	1	1	0
	+ 3	9	8	7
	9	0	9	7
8.	Th	Ц	Т	

9.	Th	Н	T	0
		1		
	7	3	5	4
	+ 1	4	8	7
	8	8	4	1

HOTS QUESTION

I am a 3–digit number. After adding 1 to me, you need to regroup the ones, tens and hundreds which number am I?

Exercise 2.4

82

3117

7700

Α. Add the following.

$$00 = 7414$$

$$3479 + 200$$

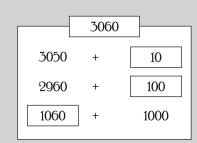
188

3679

9007

Tricky Maths

Write the missing numbers in each box to get the number written on the top.



Life Skill

Number of days from 1st July to 15th August

$$= 31 + 14 = 45 \, \text{days}$$

So, Aryan will not be able to buy the purse.

Exercise 2.5

Estimated sum

+ 5 0

1 3 0

Estimated sum

+ 3 0

1 2 0

9 0

8 0

A.

82 is rounded off to 80. 1. 46 is rounded off to 50.

$$\therefore$$
 Estimated sum = $80 + 50 = 130$.

87 is rounded off to 90. 2. 29 is rounded off to 30.

$$\therefore$$
 Estimated sum = 90 + 30 = 120.

33 is rounded off to 30. 3. 78 is rounded off to 80. \therefore Estimated sum = 30 + 80 = 110.

Actual sum

Actual sum

	8	7
+	2	9
1	1	6

Actual sum

	3	3
+	7	8
1	1	1

- 4. 48 is rounded off to 50. 36 is rounded off to 40.
 - \therefore Estimated sum = 50 + 40 = 90.
- Estimated sum

+	4	0
.	9	0

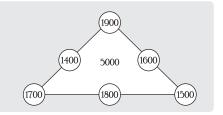
Actual sum

	8	4
+	3	6
	4	8

HOTS QUESTION

The three number along each line add up to 5000.

Fill the missing numbers 1400, 1500, 1600, 1700, 1800 and 1900.



Exercise 2.6

- 1. Packets in a dairy = 650 Packets delivered by the truck = 297
 - \therefore Total packets in the dairy = 650 + 297

- Thus, there are 947 packets in the dairy.
- 2. Number of boys in the School = 875Number of girls in the School = 562
 - :. Total number of students in the School =

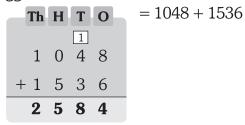
Thus, 1437 students are present in the School.

Number of pencils in a box = 1499
Number of pencils in a carton = 788
∴ Total number of pencils = 1499 + 788



Thus, there are 2287 pencils in all.

- **4.** Eggs sells in first week = 1048 Eggs sells in second week = 1536
 - .. Total eggs sells in both week



- Thus, total 2584 eggs sells in super market. **5.** People went to see the football match = 1354
 People went to see the cricket match = 3528
 - \therefore Total people went to see matches = 1354

- Hence, 5882 people went to see the matches.
- 6. Students travel by car = 1845 Students travel by school bus = 3485 Students travel by walk = 1235
 - \therefore Total students in the school = 1845 + 3485 + 1235

Thus, there are 6565 students in the school.
People seeing match on Saturday = 4565
People seeing match on Sunday = 3785
∴ Total people seeing match on both days = 4565 + 3785



Thus, 8350 people went to see the badminton match on Saturday and Sunday altogether.

Numbers of roses = 1254
Numbers of marigold = 1575
∴ Total number of flowers in the shop =



Thus, there are 2829 flowers in the shop.

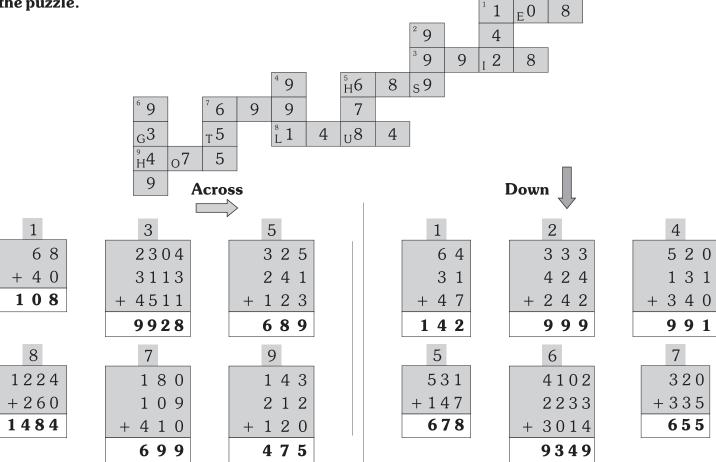
Mental Maths Corner (MCQ's)

1254 + 1575

1. (d) 2. (b) 3. (a) 4. (d) 5. (a)

NEP SDGs for Qualitative Education

Add and write your answers in the appropriate across and down positions. The number you record in the white box shows where the letter should go in the code box at the bottom to solve the puzzle.



What kind of house always weighs the least?

Code	1	2	3	4	5	6	7	8	9	0
Couc										E
	ᆫ	1	G	П	1	П		U	3	

Chapter

3

Subtraction

Roll Back

A. 1. We need to find out how many are left.



→



7 birds

- 3 flew away

4 left

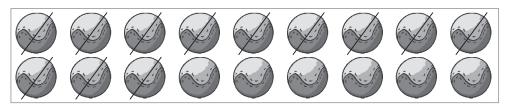
- 7 birds
- 3 flew away
- 4 birds are left

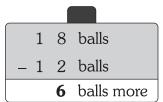


2. We need to compare groups.

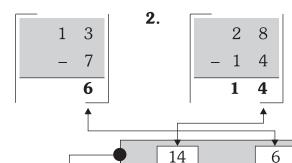
Ravi has 18 balls and Vinay has 12 balls.

Who has more balls and how many?

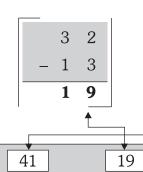




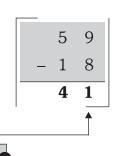
- Ravi has 6 more balls than Vinay.
- B. 1.



3.



4.



0

0

Let's Do

4.

Fill in the blanks:

- 1. 34-0
 - 34-0 = 34125-125 = 0
- 2. 147-1 = 146

157-0 = 157

- 3. 97-97 =
- 6. 870-870 =

Exercise 3.1

- A. Fill in the
 - **1.** 324 0
- = 324

0

5.

- **3.** 890 890 =
- **5.** 597 **0** = 597 **7. 475** - 1 = 474
- **9.** 999 0 = **999**

- **02.** 251 1 = **250**
- **04.** 199 0 = **199**
- **06.** 843 **843** = 0
- **08.** 651 0 = 651
- **10.** $515 515 = \mathbf{0}$

Let's Do

Add the following:

Exercise 3.2

3.

A. 1.
$$65-39 = 26$$
 2. $52-16 = 36$ 3. $70-36 = 34$ **B.** 1. $72-49 \Rightarrow 72-49$

Now,
$$72 - 40 = 32$$

 $32 - 9 = 23$
 $\therefore 72 - 49 = 23$
 $2.46-18 \Rightarrow 46-18$

Now,
$$46 - 10 = 36$$

 $36 - 8 = 28$
 $36 - 18 = 28$
 $36 - 18 = 28$
 $36 - 18 = 28$

Now,
$$70 + 2$$
 (expanding form)
 $93 - 70 = 23$
 $23 - 2 = 21$
 $93 - 72 = 21$

6.

2.

4.
$$73-17$$
 ⇒ $73-17$

10 + 7 (expanding form)

Now, $73 - 10 = 63$
 $63 - 7 = 56$
 $\therefore 73 - 17 = 56$

5. $87-54$ ⇒ $87-54$

50 + 4 (expanding form)

Now, $87 - 50 = 37$
 $37 - 4 = 33$
 $\therefore 87 - 54 = 33$
6. $66-25$ ⇒ $66-25$

20 + 5 (Expanding form)

Now, $66 - 20 = 46$
 $46 - 5 = 41$
 $\therefore 66 - 25 = 41$

2 7 5 2

-1 2 4 0

Th- H - T - O -

7 5 7 8

3.

4.

Th- H - T - O

7 9 6 4

5. Th H T O 5 1 0 0 -400001 1 0 0

6. Th H T O 7 6 2 5 -46043 0 2 1

7. Th H T O 5 9 8 7 -36432 3 4 4

Th H T O 5 7 6 -23505 2 2 6

HOTS QUESTION

Whoam I?

1000 If 400 is subtracted from me, the answer is 600. 900 If 200 is subtracted from me, the answer is 700. If 20+30 is subtracted from me, the answer is 200. 250 If 276 is subtracted from me, the answer is 300. 576

Let's Do

Add the following:

1.		Th	Н	T	О	
		$\mathfrak{G}^{\overline{5}}$	3 ¹³	98	0 D	
	_	- 1	7	8	6	
		4	6	0	4	

2. Th Η T Ο 817 6¹⁵ 717 - 2 9

3. Th Η T Ο 87 89 p⁹ A¹⁰ - 4 4

 Th Η T 0 7⁶ 8⁹ A 9 A 10 - 5

Exercise 3.3

A. 1. Th- H - T - O

(3) $(2)^2$ $(1)^1$ (15)A 3 2 5 4

2 9 7 7

5. Th-H-T-O (6) $(10)^9$ $(7)^7$ (16)7 8 8 6 3 2

2. Th- H - T - O (7) $(10)^9$ $(4)^4$ (13)8 0 5 3 9 6 4 2 0 8 9

Th- H - T - O (4) (0^{1,0} (7^{1,7} (12) 5182 - 2 8 8 6 2 2 9

3. Th- H - T - O (5) (15) 9 8 5 -2446 **5** 1 3

7. Th- H - T - O 8 9 9 10 9000 -6377 2 6 2 3

4. Th- H - T - O (4) (9) (10) 6 5 0 0 3 9 3 1 0 3

8. Th- H - T - O 6 9 9 10 7 0 0 0 - 4 7 9 9 2 2 1

В. 1. -Th- H - T - O

(5) $(4)^4$ (17)8 8 8 7 - 3 4 5 8 5 1 9 9

8 7

> 2. Th-H-T-O

(6) (16) 5 7 8 3 5 8 5 2 1 8

3. -Th- H - T - O (5) (14)

8 5 & A - 7 3 2 7 1 2 3 7

4. Th-H-T-O

(8) (12) 6 4 9 2 - 3 2 7 5 3 2 1 7

Exercise 3.4

Checking the answer

Th- H - T - O (5) $(11)^{1}$ $(1)^{1}$ (13)8223 -2435 3 7 8 8



2. 8252 - 1664Subtraction

Checking the answer

9999-5555 6. Subtraction

Checking the answer

3. 5531 - 3716Subtraction

Checking the answer

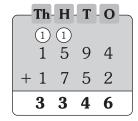
4000 - 13537. Subtraction

Checking the answer

4. 7346 - 4752 Subtraction

3346 - 17528. Subtraction

Checking the answer



Th- H - T - O

Checking the answer

4671-2594 9. Subtraction

Checking the answer

6223 - 24355. Subtraction

Checking the answer

Exercise 3.5

A. 1. Baked fruit buns = 2500Sold fruit buns = 972

> = 2500 - 972Buns are left to be sold

Th	H-	T	0
_	4	_	_
2	5	0	0
_	9	7	2
1	5	2	8

Thus. 1528 buns are left to be sold.

2. Virat scored $= 1897 \, \text{runs}$ Suresh Scored $= 1298 \, \text{runs}$ \therefore Difference in Score = 1897 - 1298

> Th- H - T - O (7) $(8^{1})^{8}$ (17)1897 -1298 5 9 9

Thus. Virat scored 599 more runs than Suresh scored.

 $= 599 \, \mathrm{runs}$

3. Cost of books and clothes purchased by Shruti = ₹2754

She gave money to the shopkeeper = 3000

∴ Remaining amount = ₹3000-2754=₹246

Th- H - T - O 2 9 9 10 3000 -27542 4 6

Thus, Shruti will get ₹246 back.

4. Cost of a cycle and a washing machine

= ₹ 7995

Cost of cycle =₹2973

:. Cost of washing machine

= (7995 - 2973)Th- H - T - O 7 9 9 5 -29732 2

Thus, the cost of washing machine is $\stackrel{?}{\sim}$ 5022.

- **5**. = ₹8000 Earning per month Saving money per month = ₹1235
 - :. His monthly expenditure

= ₹ (8000–1235)

Th- H - T - O -7 10 10 10 10 8 9 9 9 -1 2 3 56 7 6 5

Hence, the monthly expedience of Ratna's father is ₹ 6765.

Tricky Maths

Fill in the blanks:

Exercise 3.6

A. 1. Books in library

Books added in library

Total books in library

Total no. of torn books thrown away Now, remaining Books in library

7814

986

7814 + 986

8800

439 = 8800 - 439

8361

Th H T O

1 1 1 7 8 1 4

8 6

8 8 0 0

Th H T O 7 9 10 8800

4 3 9 8 3 6 1

2. Monthly earning of Mr Verma Monthly earning of Mrs Verma

₹3690 = ₹6250 + 3690 =

.. Total earning of both

₹9940 =

₹6250

Th H T O 8 14 9 9 4 0

-7550

2 3 9 0

Money spent ₹7550 = ∴ Money saved

₹ (9940 – 7550) =

₹2390 =

Th H T O 1 6 2 5 0 + 3 6 9 0 9 9 4 0

3. Bottles loaded in a truck

4500 Bottles delivered in one shop = 1475Bottles delivered in another shop = 1950

: Total bottles delivered in both the shops = 1475 + 1950 = 3425Now, Bottles left in the truck = 4500 - 3425 = 1075

So, 1075 Bottles were left in the truck.

Th H T O

1 1 1 4 7 5

+ 1 3 4 2 5

Th H T O 4 9 10 4 5 0 0

-3425 1 0 7 5

Photos capacity in a album

Photos put by Ankit Photos put by his sister

.. Total photos put in the album

Now, Photos can be put in the album

1600

428

=

=

=

738 428 + 738 = 1166

1600 - 1166 = 434

Th H T O

1 4 2 8

7 3 8 1 1 6 6

Th H T O 5 9 10 1600 -1166 4 3 4

Thus, 434 photos can be but in the album

Mental maths corner (MCQs)

1. (c)

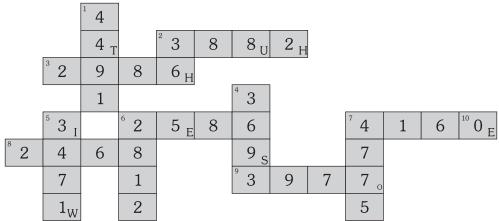
4.

2. (d) 3. (a) 4. (d)

NEP Cross-Cultural Learning

Solve the problems and write your answers in the appropriate across and down positions.

The number you record in the white box shows where the letter should go in the code boxes at the bottom to solve the riddle.



Name of the America's President's House.

Code

	w	Н	ī	Т	Е	Н	0	U	S	E
е	1	2	3	4	5	6	7	8	9	0

Across



$$2.6994 - 3112 = 3882$$

6.
$$7899 - 5313 = 2586$$

Down

1.
$$6897 - 2406 = 4491$$

7.
$$5976 - 1201 = 4775$$

10.
$$4586 - 4586 = \mathbf{0}$$

Chapter

Roll Back

$$= 4 \times 4 = 16$$

$$= 5 \times 7 = 35$$

$$= 3 \times 5 = 15$$

$$9 \times 2 \longrightarrow 18 \longrightarrow 3 \times 6$$

$$4 \times 6 \rightarrow 24 \rightarrow 3 \times 8$$

$$10 \times 3 \rightarrow 30 \rightarrow 6 \times 5$$

Multiplication

4.
$$8+8+8+8+8+8 = 6 \times 8 = 48$$

5.
$$9+9+9+9+9 = 5 \times 9 = 45$$

$$4 \times 9 \rightarrow 36 \rightarrow 6 \times 6$$

$$6 \times 7 \longrightarrow 42 \longrightarrow 21 \times 2$$

$$8 \times 6 \rightarrow 48 \rightarrow 12 \times 4$$

Let's Do

Fill in the blanks.

1.
$$1 \times 12 = 12$$

$$4.9 \times 2 = 2 \times 9$$

2.
$$0 \times 5 = 0$$

5.
$$1 \times 9 = 9$$

$$3. 3 \times 0 = 0$$

6.
$$1 \times 5 = 15$$

Exercise 4.1

A. 1.
$$8 \times 9 = 9 \times 8$$

3.
$$101 \times 0 = \mathbf{0}$$

5.
$$5 \times 6 = 6 \times 5$$

7.
$$99 \times 0 = 0$$

9.
$$44 \times 0 =$$
0

11.
$$43 \times 19 \times 28 = 19 \times 43 \times 28$$

2.
$$10 \times 1 = 10$$

4.
$$(5 \times 6) \times 7 = (5 \times 7) \times 6$$

6.
$$23 \times 1 = 23$$

8.
$$4 \times (7 \times 8) = 7 \times (4 \times 8)$$

10.
$$44 \times 33 = 33 \times 44$$

12.
$$6507 \times 0 = 0$$

Let's Do

Multiply:

Exercise 4.2

H-T-O

4 3

 \times 3

A. 1.

2.

1 2 9

H-T-O

7 1

 \times 5

6.

7.



8.

9.

3.

5.

12. H T O
$$6^{\circ}4$$
 × 6 3 8 4

В.

2 5 0

2.

ط	T —	0
	31	7
	×	2
	7	4

3.

4.

5.

6.

$$\begin{array}{c|c}
\mathbf{H} & \mathbf{T} & \mathbf{O} \\
4^{\circ} & 4 \\
\times & 4 \\
\hline
\mathbf{1} & \mathbf{7} & \mathbf{6}
\end{array}$$

Let's Do

Multiply.

2.

H	T	O
	×	6
6	6	6

3.

Let's Do

Multiply.

1.	H 2	T 2 ⁽¹⁾	O 5
		×	3
	6	7	5

Exercise 4.3

6.
$$\begin{array}{c|c} H - T - O \\ \hline 1^{(1)} & 4^{(1)} & 3 \\ \hline & \times & 4 \\ \hline & 5 & 7 & 2 \\ \end{array}$$

8.
$$8^{1} 2^{3} 9$$
 $\times 4$ 3 3 1 6

5.
$$H - T - O - 1^2 4^3 7$$

 $\times 5$
 $7 3 5$

12. Th-H-T-O-
$$2^4 \ 5^6 \ 8$$
 $\times \ 6$ 2 0 6 4

Tricky Maths

Find the missing digits.

10.

A.

\times	11	12	13	14	15	16	17	18	19	20
1	11	12	13	14	15	16	17	18	19	20
2	22	24	26	28	30	32	34	36	38	40
3	33	36	39	42	45	48	51	54	57	60
4	44	48	52	56	60	64	68	72	76	80
5	55	60	65	70	75	80	85	90	95	100
6	66	72	78	84	90	96	102	108	114	120
7	77	84	91	98	105	112	119	126	133	140
8	88	96	104	112	120	128	136	144	152	160
9	99	108	117	126	135	144	153	162	171	180
10	110	120	130	140	150	160	170	180	190	200

R	1	18×7	= 126
D.	_ I.	10 ^ /	- 120

2.
$$16 \times 5 = 80$$

$$3. 19 \times 8 = 152$$

4.
$$7 \times 15 = 105$$

5.
$$13 \times 4 = 52$$

6.
$$15 \times 9 = 135$$

8. $5 \times 12 = 60$

7.
$$12 \times 8 = 96$$

9. $3 \times 19 = 57$

11.
$$17 \times 3 = 51$$

12.
$$9 \times 15 = 135$$

Exercise 4.5

A. Find the product.

1.
$$7 \times 10 = 70$$

4.
$$10 \times 70 = 700$$

7.
$$91 \times 10 = 910$$

$$2. 8 \times 10 = 80$$

5.
$$72 \times 10 = 720$$

8.
$$10 \times 274 = 2740$$

$$3. 11 \times 10 = 110$$

6.
$$10 \times 50 = 500$$

9.
$$10 \times 145 = 1450$$

В. Multiply.

1.
$$5 \times 20 = 100$$

4.
$$7 \times 70 = 490$$

$$7. \quad 5 \times 30 \quad = \mathbf{150}$$

$$2.5 \times 90 = 450$$

$$5. \ 3 \times 80 = 240$$

8.
$$7 \times 60 = 420$$

$$3. 50 \times 3 = 150$$

6.
$$20 \times 9 = 180$$

9.
$$60 \times 8 = 480$$

Tricky Maths

Write the missing factors.

2.
$$\mathbf{6} \times 50 = 300$$

$$3. 6 \times 30 = 180$$

4.
$$9 \times 10 = 90$$

6.
$$8 \times 80 = 640$$

9.
$$2 \times 90 = 180$$

Tricky Maths

Multiply:

1.
$$34 \times 99 = 34 \times (100 - 1)$$

$$= 34 \times 100 - 34 \times 1$$

$$=3400-34$$

2.
$$76 \times 99 = 76 \times (100 - 1)$$

$$= 76 \times 100 - 76 \times 1$$

$$=28\times100-28\times1$$

$$=2800-28$$

4.
$$63 \times 99 = 63 \times (100 - 1)$$

$$=63 \times 100 - 63 \times 1$$

5.
$$82 \times 99 = 82 \times (100 - 1)$$

$$= 82 \times 100 - 82 \times 1$$

$$=8200-82$$

$$3. \quad 28 \times 99 = 28 \times (100 - 1)$$

6.
$$99 \times 99 = 99 \times (100 - 1)$$

Find the product. A.

1.
$$7 \times 100 = 700$$

4.
$$700 \times 5 = 3500$$

7.
$$26 \times 200 = 5200$$

10.
$$8 \times 300 = 2400$$

2.
$$12 \times 100 = 1200$$

5.
$$25 \times 100 = 2500$$

8.
$$3 \times 500 = 1500$$

11.
$$97 \times 100 = 9700$$

3.
$$100 \times 36 = 3600$$

6.
$$32 \times 100 = 3200$$

9.
$$6 \times 400 = 2400$$

12.
$$7 \times 400 = 2800$$

Let's Do

Find the product.

1.	H	T	0
		1	4
	×	1	5
		7	0
	1	4	0
	2	1	0

6

Exercise 4.7

1	Λ	2	6
	8	1	0
	2	1	6
	×	3	8
		2	7

2

7

Th	H	T	0	
		6	0	
	×	2	4	
	_		_	
	2	4	0	
1	2	_	0	
1		0	_	

7 0 4

6.	—Th-H-T-O
٠.	

Th- H - T - O -

×	2 3	8 2	
	5	6	
8	4	0	
G	_		

5 .	Th- H-	T	- O -
		0	1

	9	3	0	
		3	1	
	×	3	1	
		3	1	

T	0
1	2
1	9
0	8
2	0
	1 1 0

—Th	H	T	0	_
		3	9	
	×	4	5	
	1	9	5	
1	5	6	0	

Th-	H	T	0	_
		4	3	
	×	2	1	
		4	3	
	8	6	0	
	9	0	3	

Th-	Н	T	0	_
		2	4	
	×	2	7	
	1	6	8	
		6 8	8 0	

—Th	Н	T	0
		1	8
	×	5	7
	1	2	6
	9	0	Λ
	7	U	0
1	0	2	6

Н	T	0-
	9	8
×	6	4
3	9	2
8	8	0
2	7	2
	× 3 8	× 6 3 9 8 8

—Th-H	T	0
	6	0
×	1	5
3	0	0
6	0	0
9	0	0

HOTS QUESTION

The age of harpreet's granny = 65 years

And, the number of moths in a year = 12

Number of months in 65 years $= 65 \times 12 = 780$

Hence, the age of harpreet's granny is 780 months.

Let's Do

Multiply by expanding the bigger number.

$$= 46 \times 9$$

$$40 + 6$$

$$\Rightarrow$$

$$40 \times 9 = 360$$

 $6 \times 9 = +54$
 414

Thus, 46
$$4 = 38 \times 4$$
 $30 + 8$

$$30 \times 4 =$$

$$\Rightarrow$$

$$3 \times 4 = \underbrace{+32}_{152}$$

$$8 \Rightarrow$$

$$50 \times 8 = 400$$
 $4 \times 8 = +32$
 432

$$7 \Rightarrow$$

$$90 \times 7 = 2 \times 7 =$$

$$2 \times 7 = \underbrace{+14}_{644}$$

Thus,
$$= 42 \times 40 + 2$$

$$6 \times 9 = +54$$

$$4 \cdot 14$$

$$30 \times 4 = 120$$

$$8 \times 4 = \underbrace{+32}_{152}$$

$$4 \times 8 = \underbrace{+32}_{432}$$

$$90 \times 7 = 630$$

 $2 \times 7 = +14$

$$\times 7 = \underbrace{+14}_{644}$$

$$2 \times 5 = 200$$
 $2 \times 5 = +10$
 210

113

6.
$$98 \times 6 = 98 \times 6 \Rightarrow 90 \times 6 = 540$$

 $90 + 8 \times 6 = +48$
Thus, $98 \times 6 = 588$

HOTS QUESTION

Number of hours from 12 o'clock noon to 12 o'clock midnight = 12 hours

Minutes in 1 hour = 60

Minutes in 12 hours $= 60 \times 12$

 $=720 \, \text{minutes}$

The second hand of watch completes 1 round in 1 minutes.

Total number of rounds in 12 hours = 720

Hence, the second hand of watch will complete 720 rounds from 12 o'clock noon to 12 o'clock midnight.

Exercise 4.8

A. 1.
$$31 \times 7$$
 $\Rightarrow 31 \times 7$ $\Rightarrow 30 \times 7 = 210$ $1 \times 7 = \frac{+7}{217}$

2.
$$27 \times 5$$
 $\Rightarrow 27 \times 5$ $\Rightarrow 20 \times 5 = 100$
 $20 + 7$ $7 \times 5 = +35$
 $20 \times 5 = +35$

3.
$$42 \times 5$$
 $\Rightarrow 42 \times 5$ $\Rightarrow 40 \times 5 = 200$
 $40 + 2$ $2 \times 5 = +10$
 210

4.
$$36 \times 8$$
 $\Rightarrow 36 \times 8$ $\Rightarrow 30 \times 8 = 240$
 $30 + 6$ $6 \times 8 = 48$

5.
$$28 \times 9$$
 $\Rightarrow 28 \times 9$ $\Rightarrow 20 \times 9 = 180$
 $20 + 8$ $8 \times 9 = +72$
 252

6.
$$68 \times 4$$
 $\Rightarrow 68 \times 4$ $\Rightarrow 68 \times 4$ $\Rightarrow 60 \times 4 = 240$
 $8 \times 4 = +32$
 272

7.
$$49 \times 3$$
 $\Rightarrow 49 \times 3$ $\Rightarrow 40 \times 3 = 120$
 $40 + 9$ $9 \times 3 = \frac{+27}{147}$
 $\therefore 49 \times 3 = 147$

8.
$$54 \times 6$$
 $\Rightarrow 54 \times 6$ = 50×6 = 300 4×6 = $\frac{+24}{324}$

9.
$$37 \times 2$$
 $\Rightarrow 37 \times 2$ = 30×2 = 60
 $30 + 7$ 7×2 = $\frac{+14}{74}$

$$\therefore 37 \times 2 = 74$$

A. 1. There are 84 oranges in a box. How many oranges will there be in 48 such boxes?

Number of oranges in a box = 84 Number of boxes = 48

 \therefore Total number of oranges = $84 \times 48 = 4032$

Ans. There will be **4032** oranges in 48 boxes.

 \therefore Number of petals in 251 flowers = $251 \times 4 = 1004$

Thus, there will be 1004 petals in 251 flowers.

- 2. Number of children sit in a van = 12 Number of Vans = 35
 - \therefore Total number of children sit in 35 vans = 12×35 = 420

Thus, 420 children went for the picnic.

3. Number of toys in 1 box = 35 Number of boxes = 55

> \therefore Total number of toys in 55 boxes = 35×55 = 1925

Thus, there are 1925 toys in all the boxes.

4. Chairs in 1 row = 72 \therefore Chairs in 136 rows = $72 \times 136 = 9792$

Thus, there are 9792 chairs in the multiplex theatre.

5. Number of pages in a note book = 236

 \therefore Number of pages in 7 note book = $236 \times 7 = 1652$

Thus, there are 1652 pages in 7 note books.

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1	9	2	5	
× 5 5	1	7	5	0	
		1	7	5	
		×	5	5	
3 5			3	5	

$$\therefore$$
 Number of students in 7 rows = 213×7 = 1491

Thus, there are 1491 students in the assembly.



= 213

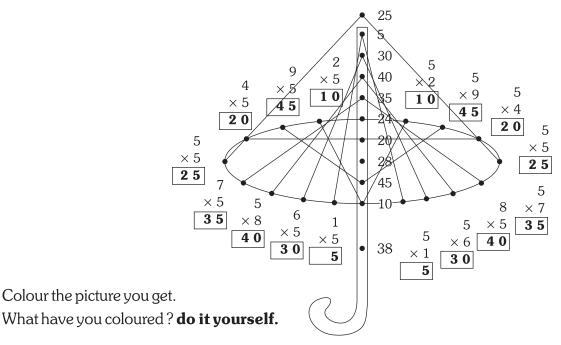
Do it yourself.

MCSs

- 1. c.
- 2.
- d.
- 3.
- 4. b.
- 5. a.

Adaptive Education

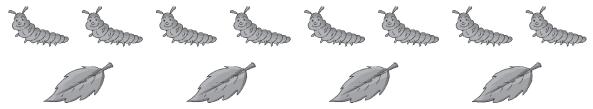
Solve the problems. Then connect the dot beside each problem to the dot beside its answer on Line A. One line has been drawn for you. Some dots on Line A will not be used.



Chapter

Division

A. 1. Take 8 catterpillar to 4 leaves so that there are an equal number of catterpillar on each leaf.

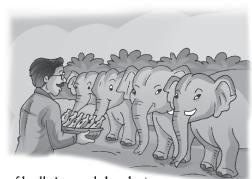


There are $8 \div 4 = 2$ catterpillars on each leaf.

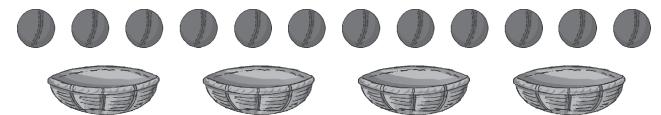
2. Raghu bought 16 bananas for 4 elephants from a fruit seller. He wants to give each elephant an equal number of bananas.

How many bananas will each elephant get?

Each elephant gets $16 \div 4 = 4$ bananas.



3. Put the 12 balls in the 4 baskets so that there are same number of balls in each basket.



There are $12 \div 4 = 3$ balls in each basket.

Exercise 5.1

- Put the flowers in the string so that there are equal number of flowers in each string.
 - Put 8 flowers into 2 strings.



 $8 \div 2 = 4$ Each string has **4** flowers.

2. Put 15 flowers into 3 strings.



 $15 \div 3 = 5$ Each string has **5** flowers.

Put 20 flowers into 4 strings.



- $20 \div 4 = 5$
- Each string has **5** flowers.

Put 12 flowers into 2 strings.



 $12 \div 2 = 6$

- Total number of bananas Number of bananas in each plate Number of plates
- $6\times4=24$
- 6







Each string has **6** flowers.

Tricky Maths

There are 5 students and 30 toffees. Renu divides the 30 toffees among them. Each child gets 6 toffees. Fill in the

- Dividend = 30
- Divisor = 5
- Quotient = 6

- 25 shells in all. **A.** 1.
 - **5** shells in each group. 5 groups.











- $25 \div 5 = 5$
- 2. 10 books in all.
 - **5** books in each group. 2 groups.

 $10 \div 5 = 2$







- Each child gets 6 apples.
 - 24 apples in equal groups of 6 = 4 groups
 - $24 \div 6 = 4$; 4 children will get 6 apples each.
- 2. Each child gets 4 apples.
 - 24 apples in equal groups of 4 = 6 groups.
 - $24 \div 4 = 6$; 6 children will get 4 apples each.
- 3. Each child gets 3 apples.
 - 24 apples in equal groups of 3 = 8 groups.
 - $24 \div 3 = 8$; 8 children will get 3 apples each.
- C. 1.









Quotient **= 3**







Divisor 4

Quotient **= 2**

 $8 \div 4 = 2$ 3.



 $20 \div 2 =$ **10**



Dividend = 20

Divisor **= 2**

Quotient = 10

D.

	DIVIDEND	DIVISOR	QUOTIENT	QUESTION
1.	32	8	4	$32 \div 8 = 4$
2.	24	4	6	$24 \div 4 = 6$
3 .	66	3	22	$66 \div 3 = 22$
4.	84	12	7	$84 \div 12 = 7$

HOTS QUESTION

Number of children at orphanage = 36

Each child get bananas = 2

 $\therefore \text{ Total number of bananas} = 36 \times 2 = 72$

:: 1 dozen = 12

 $\therefore 72 = (72 \div 12) \text{dozens}$

= 6dozens

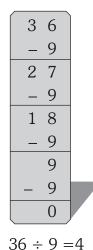
 $So, A tharva\,should\,buy\,6\,dozens\,of\,bananas.$

Exercise 5.3

A. 1.
$$12 \div 4 = 3$$

2.
$$24 \div 6 = 4$$

3.
$$50 \div 10 = 5$$



$$24 \div 6 = 4$$
 So, the quotient is 4.

$$28 \div 7 = 4$$
 So, the quotient is 4.

48 ÷ 9

48 ÷ 8	
4	8
_	8
4	0
_	8
3	2
_	8
2	4
_	8
1	6
_	8
	8
_	8
	0

 $48 \div 8 = 6$

So, the quotient is 6.

5.

56 ÷	<u>7</u>	
	5	6
	_	7
	<u>-</u>	9
	<u>-</u>	7
	4	2
	_	7
	3	6 7 9 7 2 7 5 7 8 7
	_	7
	2	8
	_	7
	2	1
	_	7
	1	4
	_	7
		7 4 7 7 7 0
	_	7
		0

 $56 \div 7 = 8$ So, the quotient is 8.

- 1. $36 \div 9 = 4$ 9 can be taken four times away from 36.
- **2.** $30 \div 6 = 5$ 6 can be taken four times away from 30.
- 3. $15 \div 3 = 5$ There are five 3s in 15.
- **4.** $72 \div 8 = 9$ There are nine 8s in 72.

Tricky Maths

Understand more

Multiplication fact

Division fact

 $\rightarrow 12 \div 3 = 4$

 \Rightarrow 12 ÷ 4 = 3



most multiplication facts have 2 division facts.

Tick (✓) the multiplication facts which have only 1 division fact.

- $15 \times 6 = 90$ 1.
- 2.
- $3 \times 3 = 9$

- 3.
- $10 \times 4 = 40$

- $6 \times 6 = 36$ 4.
- 5.
- 11 × 11 = 121 🗸
- 6.
- $9 \times 6 = 54$

Exercise 5.4

- $12 \times 7 = 84$ Α. 1.
 - $84 \div 7 = 12$
 - $84 \div 12 = 7$

- **2.** $6 \times 13 = 78$
 - $78 \div 13 = 6$ a.
 - $78 \div 6 = 13$

3.
$$12 \times 7 = 84$$

a.
$$84 \div 12 = 7$$

b.
$$84 \div 7 = 12$$

B. 1.
$$48 \div 8 = 6$$

$$\mathbf{8} \times \mathbf{6} = \mathbf{48}$$

3.
$$64 \div 8 = 8$$

$$8 \times 8 = 64$$

5.
$$56 \div 7 = 8$$

$$7 \times 8 = 56$$

4.
$$8 \times 9 = 72$$

a.
$$72 \div 9 = 8$$

b.
$$72 \div 8 = 9$$

2.
$$36 \div 12 = 3$$

$$12 \times 3 = 36$$

4.
$$51 \div 3 = 17$$

$$17 \times 3 = 51$$

6.
$$56 \div 14 = 4$$

$$14 \times 4 = 56$$

A.

Divisor Quotient Dividend

63

32

24

4

1.

$$77 \div 11 = \boxed{7}$$

6

$$\div$$
 4 = $\begin{bmatrix} 8 \end{bmatrix}$

2.

24

72

D	ivio	den	ıd	Ι)iv	iso	r	Qυ	oti	ien	t

8

$$72 \quad \div \quad 9 \quad = \quad \mathbf{8}$$

$$30 \quad \div \quad 5 \quad = \quad \mathbf{6}$$

$$42 \div 7 = \boxed{\mathbf{6}}$$

В.

Dividend **Divisor Quotient**

32 1.

=

$$28 \div \boxed{7} = 4$$

÷

$$88 \div \left[\begin{array}{c} \mathbf{8} \end{array} \right] = 11$$

$$72 \div \begin{bmatrix} \mathbf{8} \end{bmatrix} = 9$$

Dividend **Divisor Quotient**

$$42 \div \boxed{\mathbf{6}} = 7$$

$$45 \div [5] = 9$$

$$36 \div \begin{bmatrix} \mathbf{3} \end{bmatrix} = 12$$

$$12 \div \begin{bmatrix} \mathbf{1} \end{bmatrix} = 12$$

Let's Do

Divide by using division properties.

$$1. \qquad 0 \div 9 \quad = \quad \mathbf{0}$$

3.
$$39 \div 39 = 1$$

5.
$$2 \div 2 = 1$$

$$6. \qquad 0 \div 11 \qquad = \quad \mathbf{0}$$

$$8. \quad 12 \div 12 = \mathbf{1}$$

A. 1.
$$72 \div 72 = 1$$

3.
$$0 \div 217 = 0$$

7.
$$527 \div 527 = 1$$

9.
$$2670 \div 1 = 2670$$

6. 0
$$\div$$
 720 = 0

8. 0
$$\div$$
 175 = **0**

Let's Do

 $Q_{uotient} = 8$ Remainder = 0

$56 \div 8;$ 3.

 $Q_{uotient} = 10$ Remainder=0

Exercise 5.7

A. Balloons = 10Groups of balloons = 3

$$Q = 3$$
$$R = 1$$

3

$$Q = 8 ; R = 1$$

$$Q = 6 ; R = 2$$

$$\begin{array}{c|c}
 9 \\
 \hline
 3) 28 \\
 \underline{-27} \\
 \hline
 1
\end{array}$$

$$Q = 9; R = 1$$

$$\begin{array}{c|c}
 9 \\
 \hline
 2) 19 \\
 \underline{-18} \\
 \hline
 1
\end{array}$$

$$Q = 9; R = 1$$

$$Q = 9; R = 1$$

$$Q = 6 ; R = 2$$

Let's Do

1.
$$52 \div 7, Q = 7, R = 3$$

52

$$7 \times 7 + 3$$

2.
$$25 \div 6, Q = 4, R = 2$$

Quotient × Divisor + Remainder = Dividend
$$4 \times 6 + 2 = 25$$

$$4 \times 6 + 2$$

A.

QUESTION	Q	R	$Q \times DIVISOR + R$	Q × DIVISOR + R	✓ OR X ?	
				= DIVIDEND ?	Q	R
4 27	6	2	$4 \times 6 + 2 = 26$	26 ≠ 27	✓	X
3 16	5	2	$5 \times 3 + 2 = 17$	17 ≠ 16	✓	X
_7 43	6	1	$6 \times 7 + 1 = 43$	43 = 43	1	1
3 19	5	4	$5 \times 3 + 4 = 19$	19 = 19	Х	1

Let's Do

1. $66 \div 3$

1.

2.

3.

22 3) 66 -6 06 -06

Quotient=22

Remainder = 0

Check:

Divisor × Quotient + Remainder = Dividend

 $3 \times 22 + 0 = 66$ 66 = 66

So, the answer is correct.

2. 48÷6

8 6) 48 -48 0 Quotient=8;

Remainder = 0

Check:

Divisor × Quotient + Remainder = Dividend

 $6 \times 8 + 0 = 48$ 48 = 48

So, the answer is correct.

3. $555 \div 5$

111 5) 555 -5 05 -05 05 -05 05 Quotient = 111;

Remainder = 0

Check:

Divisor × Quotient + Remainder

=Dividend 5 × 111 + 0 =

 $5 \times 111 + 0 = 555$ 555 = 555

So, the answer is correct.

4. 844÷4

211 4)844 -8 04 -04 04 -04 0 Quotient = 211;

Remainder = 0

Check:

Divisor × Quotient + Remainder

= Dividend

4 × 211 + 0 = 844 844 = 844

So, the answer is correct.

5. 2468÷2

 $\begin{array}{r}
1234 \\
2) 2468 \\
-2 \\
04 \\
-04 \\
06 \\
-06 \\
08 \\
-08 \\
0
\end{array}$

Quotient = 1234;

Remainder = 0

Check:

Divisor × Quotient + Remainder

=Dividend

 $2 \times 1234 + 0 = 2468$ 2468 = 2468

So, the answer is correct.

6. 3693÷3

1231 3) 3693 -3 06 -06 09 -09 03 -03 Quotient = 1231;

Remainder = 0

Check:

Divisor × Quotient + Remainder = Dividend

 $3 \times 1231 + 0 = 3693$ 3693 = 3693

So, the answer is correct.

A. 1.

2.

Quotient = 11:

Remainder = 2

Quotient = 12: Remainder = 0

3.

$$\begin{array}{c|c}
111 \\
7)777 \\
-\frac{7}{07} \\
-\frac{07}{07} \\
-\frac{07}{0}
\end{array}$$

4.

$$\begin{array}{c|c}
322 \\
2)644 \\
-6 \\
04 \\
-04 \\
04 \\
-04 \\
0
\end{array}$$

Quotient = 111Remainder = 0

Quotient = 322Remainder = 0

5.

$$\begin{array}{r}
1122 \\
4)4489 \\
-4 \\
04 \\
-04 \\
08 \\
-08 \\
09 \\
-08 \\
1
\end{array}$$

6.

$$\begin{array}{c|c}
1120 \\
2)2240 \\
-2 \\
02 \\
-02 \\
04 \\
-04 \\
0
\end{array}$$

Quotient = 1122

Remainder = 1

Quotient = 1120Remainder = 08.

7.

$$\begin{array}{r}
1132 \\
3)3398 \\
-3 \\
03 \\
-03 \\
09 \\
-09 \\
08 \\
-06 \\
2
\end{array}$$

$$\begin{array}{r}
1220 \\
4) 4882 \\
-4 \\
\hline
08 \\
-08 \\
\hline
08 \\
-08 \\
\hline
02
\end{array}$$

Quotient = 1132

Remainder = 2

Quotient = 1220

Remainder = 2

B. 1. $42 \div 2$

$$\begin{array}{c|c}
21 \\
2) 42 \\
-4 \\
02 \\
-02 \\
0
\end{array}$$

Quotient = 21

Remainder = 0

Check: Divisor × Quotient + Remainder = Dividend $2 \times 21 + 0 = 42$ 42 = 42

So, the answer is correct.

2. $69 \div 3$

23 3) 69 -6 09 - 09

Quotient = 23

Remainder = 0

Check: Divisor × Quotient + remainder = Dividend \times 23 + 0 = 69 69 = 69

So, the answer is correct.

3. $84 \div 4$

21 4) 84 -8 04 -040

Quotient = 21

Remainder = 0

Check: Divisor × Quotient + remainder = Dividend \times 21 + 0 = 84 84 = 84

So, the answer is correct.

4. $50 \div 5$

10 5) 50 _50 0

Quotient = 10

Remainder = 0

Check: Divisor × Quotient + remainder = Dividend \times 10 + 0 = 50

50 = 50

So, the answer is correct.

5. $800 \div 8$

100 8)800 -8000

Quotient = 100

Remainder = 0

Check: Divisor × Quotient + remainder = Dividend

× 100 800 8 = 800 = 800

So, the answer is correct.

6.
$$707 \div 7$$

	101
7	707
	<u> </u>
	07
	<u>- 07</u>
	0

Quotient = 101

Remainder = 0

Check: Divisor \times Quotient + remainder = Dividend 7 \times 101+ 0 = 707

707 = 707

So, the answer is correct.

7.
$$660 \div 6$$

	-	_
	110	
6)	660	
-	6	_
	06	
-	06	
	0	
		_

Quotient = 110

Remainder = 0

Check: Divisor \times Quotient + remainder = Dividend 6 \times 110+ 0 = 660 = 660 = 660

So, the answer is correct.

8.
$$508 \div 5$$

000 .	
101	
5)508	3
<u>-5</u>	
008	3
- 005)
3	}
· —	_

Quotient = 101

Remainder = 3

Check : Divisor \times Quotient + remainder = Dividend 5 \times 101 + 3 = 508 \pm 505 + 3 = 508

508

= 508

= 4807

So, the answer is correct.

9.

$$\begin{array}{r}
1201 \\
4)4807 \\
-4 \\
08 \\
-08 \\
007 \\
-007
\end{array}$$

Quotient = 1201

Remainder = 3

Check: Divisor \times Quotient + remainder = Dividend $4 \times 1201 + 3 = 4807$ 4804 + 3 = 4807

4807

So, the answer is correct.

10. $3693 \div 3$

1231	`
3)3693	
<u>-3</u>	
06	
<u> </u>	
09	
<u> </u>	
03	
03	
0	•

Quotient = 1231

Remainder = 0

Check: Divisor \times Quotient + remainder = Dividend $3 \times 1231 + 0 = 3693$

+ 0 = 36933693 = 3693

So, the answer is correct.

11. $2809 \div 2$

	1404
2)	2809
-	2
	08
-	08
	009
.	- 008
	1

Quotient = 1404

Remainder = 1

 $\begin{array}{l} \textbf{Check:} \ \, \text{Divisor} \, \times \, \text{Quotient} \\ + \, \text{remainder} = \text{Dividend} \end{array}$

 $2 \times 1404 + 1 = 2809$

2808 + 1 = 28092809 = 2809

So, the answer is correct.

12. $6367 \div 3$

$ \begin{bmatrix} 2122 \\ 3)6367 \\ -6 \end{bmatrix} $
03
-03
06
_06
07
06
1

Quotient = 2122

Remainder = 1

Check: Divisor × Quotient + remainder = Dividend

 $3 \times 2122 + 1 = 6367$

6366 + 1 = 63676367 = 6367

So, the answer is correct.

Tricky Maths

Naman is 2926 days old. To find his age in weeks, you will divide 2926 by

7 🗸



A. 1. $73 \div 5$

Quotient = 14

Remainder = 3

 $\textbf{Check:} \ \mathsf{Divisor} \times \mathsf{Quotient}$

+ Remainder = Dividend

$$5 \times 14 + 3 = 73$$

$$70 + 3 = 73$$

73 = 73

2. $64 \div 4$

Quotient = 16

Remainder = 0

Check: Divisor × Quotient

+ Remainder = Dividend

$$4 \times 16 + 0 = 64$$

64 = 64

3. $95 \div 7$

Quotient = 13;

Remainder = 4

Check: Divisor × Quotient

+ Remainder = Dividend

$$7 \times 13 + 4 = 95$$

$$91 + 4 = 95$$

95 = 95

4. $810 \div 5$

162

5)810

31

10

0

-10

-30

-5

Quotient = 162;

Remainder = 0

Check: Divisor × Quotient

+ Remainder = Dividend

$$5 \times 162 + 0 = 810$$

810 = 810

5.
$$422 \div 3$$

$$\begin{array}{r}
140 \\
3)422 \\
-3 \\
12 \\
-12 \\
02 \\
-00 \\
2
\end{array}$$

Quotient = 140:

Remainder = 2

Check: Divisor × Quotient

+ Remainder = Dividend

$$3 \times 140 + 2 = 422$$

$$420 + 2 = 422$$

100 100

422 = 422

6.
$$523 \div 4$$

$$\begin{array}{c|c}
 & 130 \\
 & 4)523 \\
 & -4 \\
 & 12 \\
 & -12 \\
 & 03 \\
 & -0
\end{array}$$

3

Quotient = 130;

Remainder = 3

 $Check: Divisor \times Quotient$

+ Remainder = Dividend

$$4 \times 130 + 3 = 523$$

$$520 + 3 = 523$$

523 = 523

7. $507 \div 7$

Quotient = 72;

Remainder = 3

Check: Divisor × Quotient

+ Remainder = Dividend

$$7 \times 72 + 3 = 507$$

$$504 + 3 = 507$$

507 = 507

8. $318 \div 5$

18

3

_ 15

Quotient = 63;

Remainder = 3

Check: Divisor × Quotient

+ Remainder = Dividend

$$5 \times 63 + 3 = 318$$

$$315 + 3 = 318$$

318 = 318

9. $187 \div 9$

Quotient = 20;

Remainder = 7

Check: Divisor × Quotient

+ Remainder = Dividend

$$9 \times 20 + 7 = 187$$

$$180 + 7 = 187$$

187 = 187

10. $461 \div 7$

6

Quotient = 65;

Remainder = 6

 $\textbf{Check}: \mathsf{Divisor} \, \times \, \mathsf{Quotient}$

+ Remainder = Dividend

$$7 \times 65 + 6 = 461$$

$$455 + 6 = 461$$

461 = 461

11. $583 \div 8$

72 8)583 - 56 23 **–** 16 Quotient = 72;

Remainder = 7

Check: Divisor × Quotient + Remainder = Dividend

 $8 \times 72 + 7 =$ 583

> 576 + 7 =583

583 583 =

12. $789 \div 6$

131 6)789 -6 18 -1809 - 6 3 Quotient = 131;

Remainder = 3

Check: Divisor × Quotient

+ Remainder = Dividend

 $6 \times 131 + 3 =$ 789

> 786 + 3 =789

789 = 789

B. 1. 4614 ÷ 4

1153 4)4614 **-4** 06 -0421 - 20 14

- 12

Quotient = 1153;

Remainder = 2

Check: Divisor × Quotient

+ Remainder = Dividend

 $4 \times 1153 + 2 = 4614$

4612 + 2 =4614

4614 = 4614

2. $5454 \div 3$

1818 3)5454 -3 24 -2405 - 03 24 -240

Quotient = 1818;

Remainder = 0

Check: Divisor × Quotient

+ Remainder = Dividend

 $3 \times 1818 + 0 = 5454$

5454 = 5454 $3. 1459 \div 7$

1424

5)7120

21

- 20

12

20

0

-20

- 10

-5

Quotient = 208;

Remainder = 3

Check: Divisor × Quotient

+ Remainder = Dividend

 $7 \times 208 + 3 =$ 1459

1456 + 3 =1459

> 1459 =1459

4. $7120 \div 5$

Quotient = 1424;

Remainder = 0

Check: Divisor × Quotient

+ Remainder = Dividend

 $5 \times 1424 + 0 = 7120$

7120 = 7120

 $5. 1450 \div 8$

181 -8

8) 1450

65

<u>- 6</u>4

10

-8

2

1844

5)9221

42

22

21

1

-20

-20

-40

- 5

6. $9221 \div 5$

Quotient = 1844

Remainder = 1

Quotient = 181

Remainder = 2

Check: Divisor × Quotient

Check: Divisor × Quotient

1450 =

1450

1450

1450

+ Remainder = Dividend

1448 + 2 =

 $8 \times 181 + 2 =$

+ Remainder = Dividend

 $5 \times 1844 + 1 = 9221$

9220 + 1 =9221

9221 = 9221

7.
$$8317 \div 7$$

7)8317
_ 7
<u> </u>
13
<u>- 7</u>
61
– 56
57
- 56

Quotient = 1188

Remainder = 1

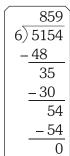
Check: Divisor × Quotient

+ Remainder = Dividend $7 \times 1188 + 1 =$ 8317

8317 8316 + 1 =

> 8317 8317 =

8. $5154 \div 6$



Quotient = 859;

Remainder = 0

Check: Divisor × Quotient

+ Remainder = Dividend

 $6 \times 859 + 0 = 5154$

5154 = 5154

9. $7165 \div 2$

Quotient = 3582;

Remainder = 1

Check: Divisor × Quotient

+ Remainder = Dividend

 $2 \times 3582 + 1 = 7165$

7164 + 17165

7165 =7165 10. $3275 \div 3$

3273 . 3	
1091 3) 3275	
<u>-3</u>	
027	
<u>- 27</u>	
05	
_ 03	
2	

1249

8)9999

19

39

79 -72

-32

– 16

-8

Quotient = 1091;

Remainder = 2

Check: Divisor × Quotient

+ Remainder = Dividend

 $3 \times 1091 + 2 =$ 3275 3273 + 2 =3275

3275 =3275

11. $9999 \div 8$

Quotient = 1249;

Remainder = 7

Check: Divisor × Quotient

+ Remainder = Dividend

 $8 \times 1249 + 7 =$ 9999

9992 + 7 =9999

> 9999 =9999

12. $7447 \div 4$



34

- 32 24

-24 07

-4

Quotient = 1861;

Remainder = 3

Check: Divisor × Quotient

+ Remainder = Dividend

 $4 \times 1861 + 3 =$ 7447

7444 + 3 =7447 7447 =7447

= 75

= 3

Life Skill

Do it yourself.

Exercise 5.11

A. 1. Number of stamps

Number of stamps paste in one page = 6

.. Number of pages

$$= 96 \div 6$$

 $= 16$

Thus, Ritu will need 16 pages to paste 96 stamps.

Total Number of trees Number of roots

 \therefore Number of trees in each row = $75 \div 3$

3) 75 -6 15 - 15 0

Thus, Mr. Khan planted 25 trees in each row.

$$\therefore \text{ Number of shelves need} = 540 \div 9$$
$$= 60$$

Thus, 60 shelves will need for 540 books.

4. Total money with Gajendra = ₹183 Cost of each ice-creams = ₹7 To get the number of ice-creams, first we will divide 183 with 7

Here 26 is the quotient and 1 is the remainder.

Thus, Gajendra can brought 26 ice-creams. and ₹ 1 will be left with him.

- 5. Number of glasses = 368
 Number of glasses in each box = 8
 - ... Number of boxes we need to pack the glasses $= 368 \div 8$ = 46

Thus, 46 boxes are needed to pack all the glasses.

6. Packets of bread = 5832
Kinds of bread packets = 4
∴ Number of each type of bread

packets
$$= 5832 \div 4$$

 $= 1458$

Thus, there are 1458 packets or each type of bread.

7. Stickers with Jenny = 1239Groups of boys = 3Number of stickers each group get = $1239 \div 3$ = 413

$$\begin{array}{c|c}
413 \\
3) 1239 \\
-12 \\
03 \\
-03 \\
\hline
09 \\
-09 \\
\hline
0
\end{array}$$

Thus, each group of boys will get 413 stickers.

Fun Time -

Find a way out by following the numbers that can be divided by 9. You can move up, down, left or right.

ENTER	63	12	80	34	85	38	
	90	72	21	54	9	45	
	38	18	36	81	79	99	
	47	98	74	24	52	27	EXIT

MCQs

1. a. 2. b. 3. b. 4. a. 5. d.

Worksheet

Match the following.

Quotient

Question

Remainder

Quotient

Question

Remainder



9) 55



7) 179





5) 27



8) 1072





4) 51



6) 233



Chapter



Roll Back

- 1. A 5 rupee coin A.
 - A match box
 - 3. Adice
 - 4. Abook
 - 5. A bangle
 - 6. A cup

Circle

Rectangle







Circle





В.















Shapes

Let's Do

Mark pink dots on the corners of each figure.







B. Match the basic plane shape with the coloured face of the solid shape.



- 2.
- 3. 4.



0

Exercise 6.1

- 6 flat square faces A. 1.
 - 2. 2 flat faces and 1 curved face
 - 3. Only 1 curved face
 - 4. 6 flat rectangular faces
 - 1 flat face and 1 curved face 5.
- В. 1. Cube 8 1 Cone 4.
- 2. Cuboid 5. Sphere
- Cube (a) (b) Cylinder
- Sphere (c)
- Cuboid (d)
- (e) Cone

8

0

- 3. Cylinder
- 4 Square 6.

- **C.** 1. Cube
 - 4. Cone

Cone

- **12** 1
- 2. Cuboid
- **12** 0
- 3. Cylinder

6.

3.

2 3 Triangle

1. D.

4.

- Cube Plane faces
 - **Both faces**

5.

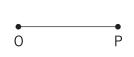
2.

5.

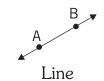
- Sphere Cuboid Sphere
- Plane faces **Curved face**
- Cylinder
- **Both faces**

Exercise 6.2

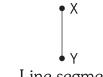
1. A.



2.



3.



4.



Line segment

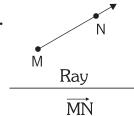


ÁΒ

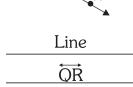
Line segment \overline{XY}

Point X

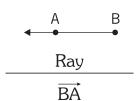
5.



6.



7.



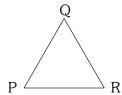
8.

A

Α

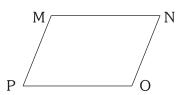
Point

В. 1.



2.

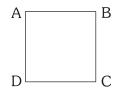
4.



Line Segments: PQ, PR and QR.

Points: P, Q and R.

3.

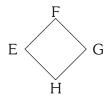


Line Segments : AB, BC, AD and DC.

Points: A, B, C and D.

Line Segments: MN, NO, PO and PM.

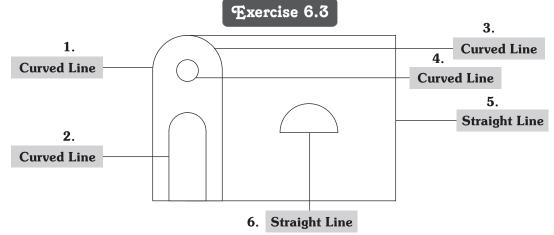
Points: M, N, O and P.



Line Segments: EF, FG, EH and GH.

Points: E, F, G and H.

A.



В. Do it yourself.

Let's Do

Draw the line segments of the following lengths:



Exercise 6.4

A. Draw line segments of the following lengths.

Do it yourself.

B. 1. A 4cm B 7cm

2. A 5.5 cm B
4. A 3 cm B

C. Measure the following line segments.

1. A

Length of $\overline{AB} = 6.5$ cm

2. P

Length of $\overline{PQ} = 8$ cm

3. M

Length of $\overline{MN} = 5$ cm

4. ×

Length of $\overline{XY} = 9.5$ cm

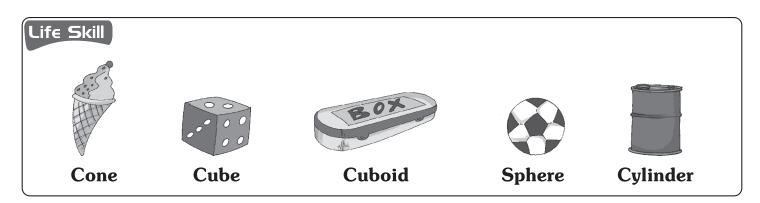
Metal Maths Corner (MCQ's)

1. c.

2. a.

3. b.

4. d.

















NEP Development of Traditional Knowledge

Solid	Number of flat faces	Number of curved faces	Number of straight edges	Number of curved edges
Cube	6	0	12	0
Cuboid	6	0	12	0
Sphere	0	1	0	0
Cone	1	1	0	1
Cylinder	2	1	0	2

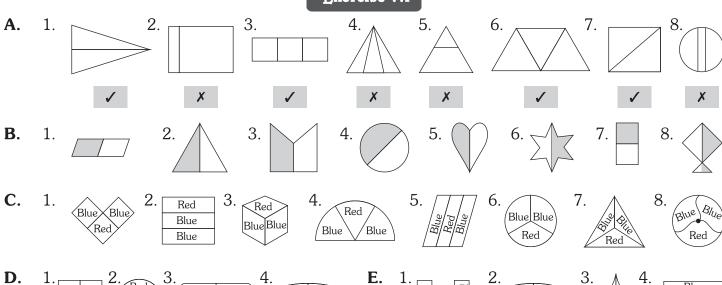
Chapter

Fractions

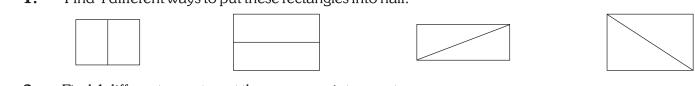
Roll Back

Do it yourself.





F. Find 4 different ways to put these rectangles into half.



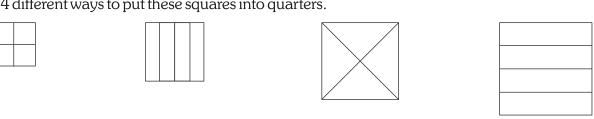
Find 4 different ways to put these squares into quarters. 2.

Red

Blue

Blue

Blue



Blue

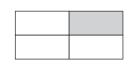
Blue

Blue

Blue Blue

Blue

G. 1.



2.



is blue.

3.

is not blue.



is green.

is red. is not red. H. Say whether true or false.

 $\frac{1}{2}$ the glass has water $\boxed{}$.

False

is not green.

 $\frac{1}{2}$ the sandwich is eaten

True

 $\frac{1}{2}$ of the chocolate is left

False

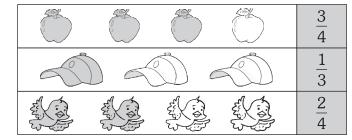
4. 4 people have shared this pizza fairly



True

Exercise 7.2

A.



			$\frac{1}{4}$
			$\frac{1}{2}$
	3		$\frac{2}{3}$

- Numerator = 51. В. Denominator = 6
- 2. Numerator = 2Denominator = 4
- 3. Numerator = 1 Denominator = 5 Point Numerator = 1 Denominator = 2

- Numerator = 3Denominator = 2
- **6.** Numerator = 2Denominator = 3
- **7.** Numerator = 1 **8.** Numerator = 3 Denominator = 4 Denominator = 4

- 1. $N \to 3, D \to 5$
 - Fraction = $\frac{3}{5}$
- **2.** $N \rightarrow 1, D \rightarrow 3$
 - Fraction = $\frac{1}{3}$
- **3.** $N \rightarrow 2, D \rightarrow 5$
- Fraction = $\frac{2}{5}$

- **4.** $N \rightarrow 1, D \rightarrow 2$
 - Fraction = $\frac{1}{2}$

5.
$$N \rightarrow 3, D \rightarrow 4$$
Fraction = $\boxed{\frac{3}{4}}$

6. $N \rightarrow 3, D \rightarrow 7$

Fraction =
$$\frac{3}{7}$$

Let's Do

How much does each pay the fruitseller? ₹221

		(₹ 120 per kg)	(₹ 60 per kg)	(₹ 24 per kg)	Total Amount
F	buys	1/4 kg;₹30	1/3 kg;₹20	1/2 kg;₹12	₹62
	buys	1/3 kg;₹ _40	1/2 kg;₹30	1/4 kg;₹6	₹76
	buys	1/2 kg;₹60	1/4 kg;₹15	1/3 kg;₹8	₹83

Tricky Maths

Circle the fractions that represent the whole.

- 4. $\frac{1}{2}$
- 5. $\frac{3}{4}$

- 8. $\frac{7}{8}$

Exercise 7.3

1. $8 \div 2 = 4$ A. $\frac{1}{2}$ of 8 = 4





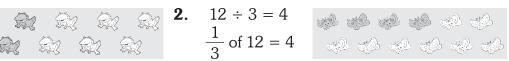
2. $12 \div 2 = 6$



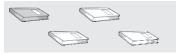


1. $9 \div 3 = 3$ В. $\frac{1}{3}$ of 9 = 3





1. $\frac{4 \div 4 = 1}{\frac{1}{4}}$ of 4 = 1C.



2. $8 \div 4 = 2$ $\frac{1}{4}$ of 8 = 2



- 1. $\frac{1}{4}$ of $32 = 32 \div 4 = 8$ 2. $\frac{1}{3}$ of $45 = 45 \div 3 = 15$ 3. $\frac{1}{2}$ of $50 = 50 \div 2 = 25$
 - 4. $\frac{1}{2}$ of $38 = 38 \div 2 = 19$ 5. $\frac{1}{4}$ of $52 = 52 \div 4 = 13$ 6. $\frac{1}{3}$ of $36 = 36 \div 3 = 12$
- Quarter of 44 E. 1.
- One-fourth of 28

 $\frac{1}{2}$ of 20 2.

- 5. $\frac{1}{4}$ of 36

- One-third of 18 3.
- $\frac{1}{3}$ of 24

- **A.** 1. Number of chips packets purchased = 5 Number of chips packets used = 3
 - \therefore Fraction of using = $\frac{3}{5}$

So, Ajay used $\frac{3}{5}$ packets.

- 2. Test marks = 10Neha's marks = 9
 - ∴ Fraction of marks = $\frac{9}{10}$ So, She get $\frac{9}{10}$ marks.

- 3. Number of roses = 13 Number of red roses = 7
 - ∴ Fraction of red roses = $\frac{7}{13}$ So, Mohini have $\frac{7}{13}$ red roses.

Mental Maths Corner (MCQ's)

1. a.

2. b.

3. a.

4. a.

NEP Life Skills

Complete the list of rotten fruits and vegetables.

- 1. Oranges $= 40 \div 2 = 20 \text{ kg}$
- 2. Onions $= 22 \div 2 = 11 \text{ kg}$
- 3. Lady-fingers $= 12 \div 4 = 3 \text{ kg}$
- 4. Carrots $= 40 \div 4 = 10 \text{ kg}$
- 5. Pomegranates $= 27 \div 3 = 9 \text{ kg}$
- 6. Grapes $= 14 \div 2 = 7$ boxes
- 7. Peas $= 20 \div 4 = 5 \text{ kg}$
- 8. Apples $= 21 \div 3 = 7 \text{ kg}$
- 9. Tomatoes $= 16 \div 2 = 8 \text{ kg}$
- 10. Mangoes $= 42 \div 3 = 14 \text{ kg}$
- 11. Bananas $= 14 \div 2 = 7 \text{ dozens}$

STOCKS

Onions 22 kg

Tomatoes 16 kg

Lady-fingers 12 kg

Carrots 40 kg

Peas 20 kg

Oranges 40 kg

Apples 21 kg

Pomegranates 27 kg

Mangoes 42 kg

Bananas 14 dozens

Grapes 14 boxes

Measurement

Chapter

8

Roll Back

A. 1.



Length of a meedle cm

2.



mL

Quantity of tea in a cup

3.



Weight of a television set

Kg

4.



g

Weight of a flower

2.



m

Length of a bus

3.



Quantity of paint in a can

L

Exercise 8.1

- **A.** 1. The length of your notebook
 - 2. The height of your water bottle
 - **3.** The height of your cupboard
 - 4. The length of a car
 - **5.** The width of a TV screen
 - **6.** The height of your bedroom
 - 7. The length of a carpet
 - 8. The length of a pencil

















- centimetre
- centimetre
- metre
- metre
- centimetre
- metre
- metre
- centimetre

Let's Do

Covert:

2.

- 1. $:: 1_{m} = 100_{cm}$
 - $\therefore 8 \,\mathrm{m} = 8 \times 100 \,\mathrm{cm}$ $= 800 \,\mathrm{cm}$
 - = 800
 - $\therefore 1_{\text{m}} = 100_{\text{cm}}$ $\therefore 17_{\text{m}} 6_{\text{cm}} = 17 \times 1$
 - $\therefore 17 \text{ m} 6 \text{ cm} = 17 \times 100 \text{ cm} + 6 \text{ cm}$ = (1700 + 6) cm= 1706 cm
- 3. $:: 100_{\text{cm}} = 1_{\text{cm}}$
 - $\therefore 675 \, \text{cm} = 600 \, \text{cm} + 75 \, \text{cm}$
 - $= (600 \div 100)_{\text{m}} + 75_{\text{cm}}$
 - = 6 m 75 cm
- 4. $:: 100_{\text{cm}} = 1_{\text{m}}$
 - ∴ 805cm = 800cm + 5cm
 - $= (800 \div 100)_{m} + 5 \text{ cm}$ = 8 m 5 cm

- 5. : 1 km = 1000 m
 - $\therefore 8 \, \text{km} = 8 \times 1000 \, \text{m}$
 - $= 8000 \,\mathrm{m}$
- 6. : 1 km = 1000 m
 - $...8 \,\mathrm{km7m} = 8 \times 1000 \,\mathrm{m} + 7 \,\mathrm{m}$ $= (8000 + 7) \,\mathrm{m}$
 - $= 8007 \,\mathrm{m}$
- 7. $:: 1000 \,\mathrm{m} = 1 \,\mathrm{km}$
 - $...8009_{\rm m} = 8000_{\rm m} + 9_{\rm m}$
 - $= (8000 \div 1000) \text{km} + 9 \text{ m}$
 - = 8 km 9 m
- 8. $:: 1000 \,\mathrm{m} = 1 \,\mathrm{km}$
 - $\therefore 1125 \,\mathrm{m} = 1000 \,\mathrm{m} + 125 \,\mathrm{n}$
 - $= (1000 \div 1000) \text{km} + 125 \text{ m}$
 - = 1 km 125 m

A.	1.	4 m⇒	As, $1 \text{ m} = 100 \text{ cm}$ So, $4 \text{ m} = 100 \times 4 \text{ cm}$ = 400 cm		5.	2 km 650 m⇒	As, $1 \text{ km} = 1000 \text{ m}$ So, $2 \text{ km} 650 \text{ m}$ = $(2 \times 1000) \text{ m} + 650 \text{ m}$
	2.	8 m⇒	As 1 m = 100 cm So, 8 m = $100 \times 8 \text{ cm}$		6	71 150	$= 2000 \mathrm{m} + 650 \mathrm{m}$ = 2650 m
	3.	6 m⇒	= 800 cm As 1 m = 100 cm So, 6 m = 100 × 6 cm $= 600 cm$		6.	7 km 150 m≕	>As, 1 km = 1000 m So, 7 km 150 m = (7 × 1000) m + 150 m = 7000 m + 150 m
	4.	$3 \mathrm{m} 2 \mathrm{cm} \Rightarrow$	As, $1 \text{ m} = 100 \text{ cm}$ So, $3 \text{ m} 20 \text{ cm}$ $= (3 \times 100) \text{ cm} + 20 \text{ cm}$ = 300 cm + 20 cm = 320 cm		7.	$9 \mathrm{km} 50 \mathrm{m} \Rightarrow$	= 7150 m As, $1 \text{ km} = 1000 \text{ m}$ So, $9 \text{ km} 50 \text{ m}$ = $(9 \times 1000) \text{ m} + 50 \text{ m}$ = $9000 \text{ m} + 50 \text{ m}$
	5.	7 m 45 cm⇒			8.	$3 \mathrm{km}60 \mathrm{m} \Rightarrow$	= $9050 \mathrm{m}$ As, 1 km = $1000 \mathrm{m}$ So, 3 km 60 m = $(3 \times 1000) \mathrm{m} + 60 \mathrm{m}$ = $3000 \mathrm{m} + 60 \mathrm{m}$
	6.	8 m 5 cm⇒	As $1 \text{ m} = 100 \text{ cm}$ So, $8 \text{ m} 5 \text{ cm}$ $= (8 \times 100) \text{ cm} + 5 \text{ cm}$ = 800 cm + 5 cm	C.	1.	600 cm⇒	= 3060 m ∴ 100 cm = 1 m ∴ 600 cm = $(600 \div 100)$ m = 6 m
	7.	19 m 2 cm⇒	= 805 cm As 1 m = 100 cm So, 19 m 2 cm		2.	900 cm⇒	∴ $100 \text{ cm} = 1 \text{ m}$ ∴ 900 cm = $(900 \div 100) \text{ m} = 9 \text{ m}$
			= (19×100) cm + 2 cm = 1900 cm + 2 cm = 1902 cm		3.	1200 cm⇒	∴ $100 \text{ cm} = 1 \text{ m}$ ∴ 1200 cm = $(1200 \div 100) \text{ m}$
	8.	$21 \mathrm{m}30 \mathrm{cm} =$	As $1 \text{ m} = 100 \text{ cm}$ So, $21 \text{ m} 30 \text{ cm}$ $= (21 \times 100) \text{ cm} + 30 \text{ cm}$ = 2100 cm + 30 cm = 2130 cm		4.	1500 cm⇒	= 12 m ∴ $100 \text{ cm} = 1 \text{ m}$ ∴ 1500 cm = $(1500 \div 100) \text{ m}$
В.	1.	6km⇒	As, $1 \text{ km} = 1000 \text{ m}$ So, $6 \text{ km} = 1000 \times 6 \text{ m}$ = 6000 m		5.	745 cm⇒	= 15 m ∴ $100 \text{ cm} = 1 \text{ m}$ ∴ 745 cm
	2.	7 km⇒	As, $1 \text{ km} = 1000 \text{ m}$ So, $7 \text{ km} = 1000 \times 7 \text{ m}$ = 7000 m				$= 700 cm + 45 cm$ $= (700 \div 100) m + 45 cm$ $= 7 m + 45 cm$
	3.	4 km⇒	As, $1 \text{ km} = 1000 \text{ m}$ So, $4 \text{ km} = 1000 \times 4 \text{ m}$ = 4000 m		6.	415 cm⇒	= 7 m 45 cm ∵ 100 cm = 1 m ∴ 415 cm
	4.	5 km ⇒	As, $1 \text{ km} = 1000 \text{ m}$ So, $5 \text{ km} = 1000 \times 5 \text{ m}$ = 5000 m				= $400 \text{ cm} + 15 \text{ cm}$ = $(400 \div 100) \text{ m} + 15 \text{ cm}$ = $4 \text{ m} + 15 \text{ cm}$ = $4 \text{ m} 15 \text{ cm}$

7. $609 \text{ cm} \Rightarrow \because 100 \text{ cm} = 1 \text{ m}$ $\therefore 609 \text{ cm} = 600 \text{ cm} + 9 \text{ cm}$ $= (600 \div 100) \text{ m} + 9 \text{ cm}$ = 6 m + 9 cm

= 6 m + 9 cm= 6 m 9 cm

8. $1402 \,\mathrm{cm} \Rightarrow : 100 \,\mathrm{cm} = 1 \,\mathrm{m}$

∴ 1402 cm

 $= 1400 \, \text{cm} + 2 \, \text{cm}$

 $= (1400 \div 100) \,\mathrm{m} + 2 \,\mathrm{cm}$

 $= 14 \,\mathrm{m} + 2 \,\mathrm{cm}$

= 14 m 2 cm

D. 1. $6000 \,\mathrm{m} \Rightarrow : 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

 \therefore 6000 m = (6000 ÷

 $1000) \, \text{km} = 6 \, \text{km}$

2. $9000 \,\mathrm{m} \Rightarrow \quad \because 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

 \therefore 9000 m = (9000 \div

 $1000) \, \text{km} = 9 \, \text{km}$

3. $1100 \,\mathrm{m} \Rightarrow \quad : 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

∴ 1100 m

 $= 1000 \, \text{m} + 100 \, \text{m}$

 $= (1000 \div 1000) \text{ km} +$

 $100\,\mathrm{m}$

 $= 1 \, \text{km} + 100 \, \text{m}$

= 1 km 100 m

4. $1300 \,\mathrm{m} \Rightarrow \quad : 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

∴ 1300 m

 $= 1000 \, \text{m} + 300 \, \text{m}$

 $= (1000 \div 1000) \text{ km} +$

 $300\,\mathrm{m}$

 $= 1 \, \text{km} + 300 \, \text{m}$

 $= 1 \,\mathrm{km}\,300\,\mathrm{m}$

5. $8750 \,\mathrm{m} \Rightarrow : 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

∴ 8750 m

 $= 8000 \,\mathrm{m} + 750 \,\mathrm{m}$

 $= (8000 \div 1000) \text{ km} +$

750 m

 $= 8\,km + 750\,m$

= 8 km 750 m

6. $1050 \,\mathrm{m} \Rightarrow \quad \because 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

∴ 1050 m

 $= 1000 \,\mathrm{m} + 50 \,\mathrm{m}$

 $= (1000 \div 1000) \,\mathrm{km} + 50$

m

 $=1\,km+50\,m$

= 1 km 50 m

7. $6030 \,\mathrm{m} \Rightarrow \quad : 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

∴ 6030 m

 $=6000 \,\mathrm{m} + 30 \,\mathrm{m}$

 $= 6030 \, \text{m}$

 $= (6000 \div 1000) \text{ m} + 30$

m

 $=6 \,\mathrm{km} + 30 \,\mathrm{m}$

 $= 6 \,\mathrm{km}\,30\,\mathrm{m}$

8. $7600 \,\mathrm{m} \Rightarrow \quad : 1000 \,\mathrm{m} = 1 \,\mathrm{km}$

 \therefore 7600 m = 7000 m +

600 m

 $= (7000 \div 1000) \text{ km} +$

600 m

 $= 7 \, \text{km} + 600 \, \text{m}$

= 7 km 600 m

HOTS QUESTION

Total length of a string = 30 cm And, the number of equal pieces = 2

: Length of each piece = $(30 \div 2)$ cm

= 15cm

Hence, the length of each piece of string is 15 cm.

Let's Do

A. Add:

1.	m	cm-
	6	15
	+ 8	59
	14	74

2. **km m** 6 700 + 3 659 10 359

B. Subtract:

1.

	m —	cm—
	9	50
_	5	45
	4	05

2. **km m** 600 - 12 895 3 705

A. 1.

12	7 6	7
+ 3	2 3	
9	5 3	_
m	cm)

2.

	n	1 <u> </u>	_ cn	n	١
	2	8	1	9	
+	3	3	2	8	
	6	1	4	7	

3.

	6	330	
+	2	215	7
	4	115	
	km)

B. 1.

	- m	- cm - 3717
_	3 6	2 8
	2 7	1 9

2.

	6 2	4 9
_	3 5	1 6
	9 7	65
	_ m	cm

3.

km	m
1 6	3 7 2
- 1 3	1 2 8
0 3	2 4 4

C. 1. Length of red ribbon = 2 m 40 cmLength of green ribbon = 3 m 68 cm

 \therefore Total length of ribbon used = 2 m 40 cm + 3 m 68 cm = 6 m 8 cm

	m	c	m	
	2	4	0	Ь
+	- 3	6	8	
	6	0	8	

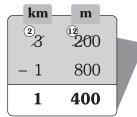
So, Ankita used 6 m 8 cm long ribbon for her dress.

- 2. Length of Cotton cloth = 6 m 70 cmLength of Silk cloth = 2 m 30 cm
 - : Total length of cloths
 - $= 6 \,\mathrm{m}\,70 \,\mathrm{cm} + 2 \,\mathrm{m}\,30 \,\mathrm{cm} = 9 \,\mathrm{m}$

m	cm	١
^① 6	7 0	
+ 2	3 0	7
9	0 0	

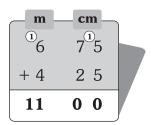
So, Mrs Kapoor purchased $9\,\mathrm{m}$ of cloth.

3. Rohan walks = 3 km 200 mShama walks = 1 km 800 m



So, Rohan walks 1 km 400 m more than Shama.

- 4. Length of one rope = 6 m 75 cmLength of Second rope = 4 m 25 cm
 - \therefore Total length of rope = 6 m 75 cm + 4 m 25 cm = 11 m

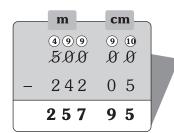


So, the total length of rope is $11\,\mathrm{m}$.

5. Total thread $= 500 \,\mathrm{m}$

Used Thread $= 242 \,\mathrm{m}\,5\,\mathrm{cm}$

 $\therefore \text{ Thread left} = 500 \,\text{m} - 242 \,\text{m} \, 5 \,\text{cm}$ $= 257 \,\text{m} \, 95 \,\text{cm}$



So, 257 m 95 cm of thread is left with the tailor.

HOTS QUESTION

The height of the pole $=100 \, \text{m}$

 $=30 \,\mathrm{m}$ Monkey climb the pole in one minute $=20 \,\mathrm{m}$ And slips downwords in one minute

 \therefore Distance covered by monkey in one minute = $30 \,\mathrm{m} - 20 \,\mathrm{m} = 10 \,\mathrm{m}$

 $=10\,\mathrm{m}\times7=70\,\mathrm{m}$ So, distance covered by monkey in 7 minutes

 $=30 \,\mathrm{m}$ And, monkey climbs in last minute

Hence, the monkey will reach the top of the pole in 8 minutes.

Let's Do

Write the missing weights for each of the following.



500g



200g



200g





1000g

2.



200g



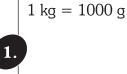




100 g 100 g 100g 1000g

Exercise 8.4

A.











200g

$$500 \, \text{g} + 200 \, \text{g} +$$





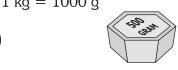


300g





1 kg = 1000 g







500 g + 500g

MATHEMATICS-3

B. 1.



3.

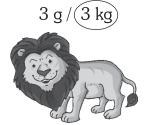
(50 g)/50 kg

4.



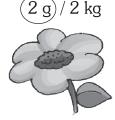
5.

2.



 $100 \, \text{g} \, / \widehat{100 \, \text{kg}}$

6.



(20 g)/20 kg

Let's Do

1. Convert 9 kg into g

 $A_{s,1} k_{6} = 1000_{6}$

 $S_0, 9 k_6 = 9 \times 1000 6 = 9000 6$

2. Convert 2 kg 3 g into g

 $A_{s,1}k_{8} = 1000_{8}$

So, $2 k_8 3_8 = (2 \times 1000)_8 + 3_8 = 2000_8 + 3_8 = 2003_8$

- 2000 8 + 3 8 - 2

3. Convert 4950 g into kg and g As, 1000 g = 1 kg $S_0,4950_8 = 4000_8 + 950_8$

 $= (4000 \div 1000) k_8 + 950 8$

 $= 4 k_8 + 950 g = 4 k_8 950 g$

4. Convert 5007 g into kg and g

 $A_{s},1000_{g} = 1k_{g}$

 $S_0,5007_8 = 5000_8 + 7_8$

 $= (5000 \div 1000) k_{8} + 7_{8}$

 $= 5 k_8 + 7_8 = 5 k_8 7_8$

Exercise 8.5

A. 1. $6 \text{ kg} \Rightarrow \qquad \therefore 1 \text{ kg} = 1000 \text{ g}$

 \therefore 6 kg = 6 × 1000 g

= 6000 g

2. $9 \text{ kg} \Rightarrow \quad \because 1 \text{ kg} = 1000 \text{ g}$

 $\therefore 9 \text{ kg} = 9 \times 1000 \text{ g}$

= 9000 g

3. $7 \text{ kg} \Rightarrow \qquad \therefore 1 \text{ kg} = 1000 \text{ g}$

 $\therefore 7 \text{ kg} = 7 \times 1000 \text{ g}$

 $= 7000 \,\mathrm{g}$

4. $2 \text{ kg} 500 \text{ g} \Rightarrow : 1 \text{ kg} = 1000 \text{ g}$

 $\therefore 2 \log 500q = 2 \log + 500q$

 $= 2 \times 1000 \,\mathrm{g} + 500 \,\mathrm{g}$

= 2000 g + 500 g

= 2500 g

5. $8 \text{ kg } 295 \text{ g} \Rightarrow : 1 \text{ kg} = 1000 \text{ g}$

∴ 8 kg 295 g

= 8 kq + 295 q

 $= 8 \times 1000 \,\mathrm{g} + 295 \,\mathrm{g}$

= 8000 g + 295 g

= 8295 g

6. $2 \lg 50 g \Rightarrow : 1 \lg = 1000 g$

 $\therefore 2 \log 50 g = 2 \log + 50 g$

 $= 2 \times 1000 \,\mathrm{g} + 50 \,\mathrm{g}$

 $= 2000 \,\mathrm{g} + 50 \,\mathrm{g}$

- 2000 g T

 $= 2050\,\mathrm{g}$

7. $3 \text{ kg } 25 \text{ g} \Rightarrow : 1 \text{ kg} = 1000 \text{ g}$

 $\therefore 3 \lg 25 g = 3 \lg + 25 g$

 $= 3 \times 1000 \,\mathrm{g} + 25 \,\mathrm{g}$

=3000 g + 25 g

= 3025 g

8. $5 \text{ kg} 5 \text{ g} \Rightarrow : 1$

 $\therefore 1 \text{ kg} = 1000 \text{ g}$

 $\therefore 5 \log 5 g = 5 \log + 5 g$

 $= 5 \times 1000 \,\mathrm{g} + 5 \,\mathrm{g}$

=5000 g + 5 g

= 5005 g

B. 1. 3456 g⇒

 $\therefore 1000 \,\mathrm{g} = 1 \,\mathrm{kg}$

 $\therefore 3456 \,\mathrm{g} = 3000 \,\mathrm{g} + 456 \,\mathrm{g}$

 $= (3000 \div 1000) \text{ kg} +$

456 g

= 3 kg + 456 g

=3 kg 456 g

2. $7676 \,\mathrm{g} \Rightarrow$ $\therefore 1000 \,\mathrm{g} = 1 \,\mathrm{kg}$ $\therefore 7676 \, g = 7000 g + 676 g$ $8490 \, g \Rightarrow$ 6. $= (7000 \div 1000) \text{ kg} +$ 676 g = 7 kg + 676 g= 7 kg 676 g3. $4030\,\mathrm{g} \Rightarrow$ $\therefore 1000 \,\mathrm{g} = 1 \,\mathrm{kg}$ $\therefore 4030 \, g = 4000 \, g + 30 \, g$ 7. $= (4000 \div 1000) \,\mathrm{kg} + 30 \,\mathrm{g}$ = 4 kg + 30 g=4 kg 30 g4. $1006\,\mathrm{g} \Rightarrow$ $\therefore 1000 \, g = 1 \, kg$ 1006 g = 1000 g + 6 g $= (1000 \div 1000) \,\mathrm{kg} + 6\,\mathrm{g}$ 8. = 1 kg + 6 g $= 1 \log 6 g$

 $\therefore 1000 \,\mathrm{g} = 1 \,\mathrm{kg}$

 $\therefore 5042 g = 5000 g + 42 g$ $= (5000 \div 1000) \text{kg} + 42\text{g}$

2.

2.

490 σ = 8 kg + 490 g=8 kg 490 g $3061 g \Rightarrow$ $\therefore 1000 \,\mathrm{g} = 1 \,\mathrm{kg}$ $\therefore 3061 \, g = 3000 \, g + 61 \, g$ $= (3000 \div 1000) \text{kg} + 61\text{g}$ =3 kg + 61 g=3 kg 61 g9464 g⇒ $\therefore 1000 \,\mathrm{g} = 1 \,\mathrm{kg}$ $\therefore 9464g = 9000g + 464g$ $= (9000 \div 1000) \text{kg} + 464 \text{g}$ = 9 kq + 464 q $=9\,kg\,464\,g$

= 5 kg + 42 g

= 5 kg 42 g

 $\therefore 1000 \, g = 1 \, kg$

 $\therefore 8490g = 8000g + 490g$

 $= (8000 \div 1000) \text{ kg} +$

5.

 $5042 \, g \Rightarrow$

Cet	CELS DO													
A.	Ad	l:						B. Subtract:						
	1.	kg —	g —	2.	kg —	g —		1.	kg –	g	2.	kg —	g	
		2	① 650		14	065			9	71010 800		11-	10(10) - 100	
		+ 3	250		+ 10	785			- 6	565		- 5	690	
		5	900		24	850			3	235		6	410	
											J			

Exercise 8.6

1. A. kg g ¹ 4 8 0 6 + 3 1 7 0 9 6 5 0

kg g 5 1 8 4 +24 2 8 6 9 4 6

kg g ^① 2 5 0 2 + 4 1 7 5 4 2 5 6

3.

3.

1. В. kg g 1 13 7 235 **-** 3 0 7 5 1 6 0 4

kg g 9 10 **(5)** в 006 **-** 3 5 2 5 2 481

kg g 8 4 10 9 950 **-** 2 4 5 5 7 495

- C. Weight of potatoes = 2 kg 500 gWeight of tomatoes = 1 kg 500 gWeight of Onions = 2 kg
 - $\therefore \text{ Total weight of vegetable}$ = 2 kg 500 g + 1 kg 500 g + 2 kg = 6 kg
 - kg
 g

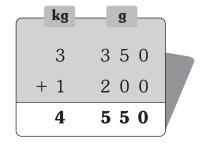
 0
 2

 2
 5 0 0

 1
 5 0 0

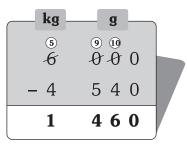
 + 2
 0 0 0

 6
 0 0 0
 - So, Mohit bought 6 kg of vegetables.
 - 2. Weight of the first bag = 3 kg 350 gWeight of the second bag = 1 kg 200 gmore than first bag
 - = 3 kg 350 g + 1 kg 200 g= 4 kg 550 g



So, the Weight of the second bag is 4 kg 550 g.

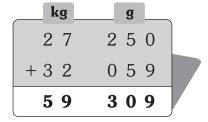
3. Sugar bought by Mrs. Gaur = 6 kgSugar consumes = 4 kg 540 gSugar left = 6 kg - 4 kg 540 g= 1 kg 460 g



Thus, 1 kg 460 g sugar is left at the end of the month.

4. Weight of first children = 27 kg 250 gWeight of second children

= 32 kg 59 g $\therefore \text{ Their Total weight} = 27 \text{ kg } 250 \text{ g}$ + 32 kg 59 g = 59 kg 309 g

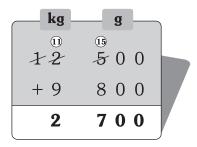


So, the Total weight of both children is 62 kg 309 g.

5. Parvati bought wheat flour = 12 kg 500 g

She used wheat flour $= 9 \, \text{kg} \, 800 \, \text{g}$

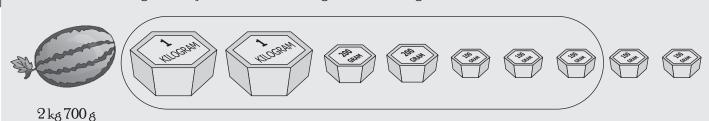
... Wheat flour left with her = 12 kg500 g - 9 kg 800 g = 2 kg 700 g



So, 2 kg 700 g of wheat flour was left with her.

OTS QUESTION

Circle the correct weight that you would use to weigh the following:



Exercise 8.7

A. 1. Water in a bucket

- 2. A small medicine bottle
- mL

L

3. Milk in a glass

- mL
- 4. The petrol tank of a car
- L

mL

5. A bowl of soup



Tricky Maths

Put >, < or = sign in the following boxes.

1. 450 ml < 2L

2. 800 mL < 1L

- $3.400 \,\mathrm{mL} + 600 \,\mathrm{mL}$
- = 1L

- 4. 1L > 500 mL + 400 mL
- 5. $200 \,\mathrm{mL} + 200 \,\mathrm{mL}$ < $500 \,\mathrm{mL}$

Exercise 8.8

- **A.** 1. $5 L \Rightarrow :: 1 L = 1000 \text{ mL}$
 - $\therefore 5L = 5 \times 1000 \,\text{mL}$
 - $= 5000 \, mL$
 - 2. $7L \Rightarrow :: 1L = 1000 \,\text{mL}$
 - $\therefore 7 L = 7 \times 1000 \,\mathrm{mL}$
 - $= 7000 \, mL$
 - 3. $6L265 \,\text{mL} \Rightarrow : 1L = 1000 \,\text{mL}$
 - ∴ 6 L 265 mL
 - $= 6 \times 1000 \text{mL} + 265 \text{mL}$
 - $=6000 \, \text{mL} + 265 \, \text{mL}$
 - $= 6265 \, mL$
 - 4. $4L750 \,\text{mL} \Rightarrow : 1L = 1000 \,\text{mL}$
 - $:: 4L750\,mL$
 - $= 4 \times 1000 \text{mL} + 750 \text{mL}$
 - $= 4000\, mL + 750\, mL$
 - $= 4750 \, mL$
 - 5. $8L750 \,\mathrm{mL} \Rightarrow :: 1L = 1000 \,\mathrm{mL}$
 - ∴ 8 L 750 mL
 - $= 8 \times 1000 \text{mL} + 750 \text{mL}$
 - $= 8000 \, \text{mL} + 750 \, \text{mL}$
 - $= 8750 \, mL$
 - 6. $5L175 \text{ mL} \Rightarrow :: 1L = 1000 \text{ mL}$
 - ∴ 5 L 175 mL
 - $= 5 \times 1000 \text{mL} + 175 \text{mL}$
 - $=5000 \, \text{mL} + 175 \, \text{mL}$
 - $= 5175 \, mL$
 - 7. $4L404 \,\text{mL} \Rightarrow :: 1L = 1000 \,\text{mL}$
 - ∴ 4 L 404 mL
 - $= 4 \times 1000 \text{mL} + 404 \text{mL}$

- $=4000\,\text{mL}+404\,\text{mL}$
- $= 4404 \, mL$
- 8. $3L330 \,\mathrm{mL} \Rightarrow :: 1L = 1000 \,\mathrm{mL}$
 - ∴ 3 L 330 mL
 - $= 3 \times 1000 \text{mL} + 330 \text{mL}$
 - $=3000\,\text{mL}+330\,\text{mL}$
 - $= 3330 \, mL$
- **B.** 1. $2222 \text{ mL} \Rightarrow : 1000 \text{ mL} = 1 \text{ L}$
 - ∴ 2222 mL
 - $= 2000 \, mL + 222 \, mL$
 - $= (2000 \div 1000) L + 222$
 - mL
 - $=2L+222\,\mathrm{mL}$
 - = **2L 222 mL**
 - 2. $3540 \,\text{mL} \Rightarrow : 1000 \,\text{mL} = 1 \text{L}$
 - ∴ 3540 mL
 - $= 3000 \,\mathrm{mL} + 540 \,\mathrm{mL}$
 - $= (3000 \div 1000) L + 540$
 - mL
 - $= 3L + 540 \,\mathrm{mL}$
 - $=3\,L\,540\,mL$
 - 3. $7878 \,\mathrm{mL} \Rightarrow : 1000 \,\mathrm{mL} = 1L$
 - ∴ 7878 mL
 - $= 7000 \, mL + 878 \, mL$
 - $= (7000 \div 1000) L + 878$
 - mL
 - $= 7L + 878 \, mL$
 - =7L878mL

4. $4338 \,\mathrm{mL} \Rightarrow :: 1000 \,\mathrm{mL} = 1 \,\mathrm{L}$

∴ 4338 mL

 $= 4000 \,\mathrm{mL} + 338 \,\mathrm{mL}$

 $= (4000 \div 1000) L + 338$

mL

 $= 4L + 338 \, mL$

= 4 L 338 mL

5. $1005 \,\mathrm{mL} \Rightarrow :: 1000 \,\mathrm{mL} = 1 \,\mathrm{L}$

∴ 1005 mL

= 1000 mL + 5 mL

 $= (1000 \div 1000)L + 5mL$

= 1L + 5mL

= 1L5 mL

6. $6556 \,\mathrm{mL} \Rightarrow : 1000 \,\mathrm{mL} = 1 \,\mathrm{L}$

∴ 6556 mL

 $= 6000 \,\mathrm{mL} + 556 \,\mathrm{mL}$

 $(6000 \div 1000) L + 556$

mL

 $= 6L + 556 \,\mathrm{mL}$

= 6 L 556 mL

7. $9356 \,\text{mL} \Rightarrow : 1000 \,\text{mL} = 1 \,\text{L}$

∴ 9356 mL

 $= 9000 \,\mathrm{mL} + 356 \,\mathrm{mL}$

 $= (9000 \div 1000) L + 356$

mL

 $= 9L + 356 \, mL$

9 L 356

8. $3477 \,\mathrm{mL} \Rightarrow :: 1000 \,\mathrm{mL} = 1 \,\mathrm{L}$

∴ 3477 mL

 $= 3000 \,\mathrm{mL} + 477 \,\mathrm{mL}$

 $= (3000 \div 1000)L + 477mL$

 $= 3L + 477 \, mL$

= 3L477 mL

Let's Do

A. Add:

1.		—mL—
	4	600
	+ 3	200
	7	800

2.	L _	mL—
	5	125
	+ 12	275
	17	400

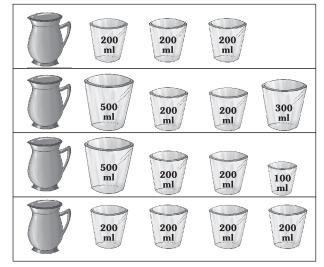
B. Subtract:

[.		L	mL
		8	1,10,10 200
	_	6	125
		2	075

2.		L	—_mL—
	1	1 <u>5</u>	101010
	- 1	2	905
		3	095

Exercise 8.9

A.



Enough	Extra	Less
		✓
	V	
1		
		√

B. 1.

8	2 5 7
+ 1	6 9 5
6	^① 5 6 2
	mL

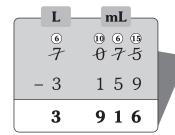
2.

9	472
+ 4	3 6 9
5	1 0 3
	mL —

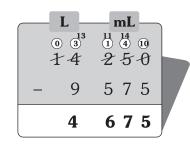
3.

	_ L _	mL_	
	6	0 1 5	
-	+ 5	3 0 5	
	11	3 2 0	

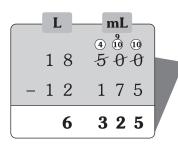
C. 1.



2.



3.



D. 1. Rekha purchase milk from one dairy

Rekha purchase milk from another dairy = 18 L 600 mL

.. Rekha purchase milk from both dairy

= 10 L300 mL + 18 L600 mL

= 10 L300 mL

201.000...1

= 28 L 900 mL

So, Rekha purchase 28 L 900 mL of milk in all.

1 0 3 0 0 +1 8 6 0 0 2 8 9 0 0

2. Capacity of a vessel

Water in vessel

... Water can be added to the vessel

 $= 15L200 \,\mathrm{mL}$

 $= 9L600 \, mL$

 $= 15L200 \, mL - 9L600 \, mL$

 $= 5L600 \,\mathrm{mL}$

So, 5L,600 mL of water can be added to the vessel.

L mL 15 200 +9 600 5 600

3. Water consumes by a family

Water consumes by another family

... Water consumes by both the faimilies

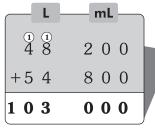
= 48 L 200 mL= 54 L 800 mL

= 48 L 200 mL

 $+54L800\,mL$

= 103 L

Hence, both the families consumes $103\,L$ of water in a day.



4. Petrol sold to one car owner

Petrol sold to secound car

Petrol sold to third car owner

Total quantity of petrol sold

= 20 L 540 mL

= 25 L 330 mL

= 30L50mL

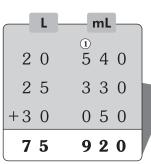
 $= 20L540 \,\text{mL} + 25L$

 $330 \, \text{mL} + 30 \, \text{L} \, 50 \, \text{mL}$

= 75 L 920 mL

a.

Hence, the petrol pump sold $75\,L\,920\,\text{mL}$ of petrol in all.



Mental Maths Conrner

MCQs

1. b.

2. a.

3.

4.

d.

5.

b



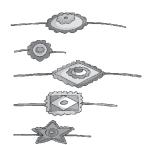
About **7.5** cm

About 3.2 cm

About **8.2** cm

About **6.5** cm

About **5.0** cm



NEP Multiple Intelligence

- a. Pencil length
- b. Height of a building
- c. Water in a mug
- d. Petrol in a full car tank
- e. Weight of a dictionary
- f. Weight of cricket ball



 $(15 \, \text{cm}) / 1 \, \text{m}$

 $(100\,\mathrm{m})/100\,\mathrm{km}$

30 L/(300 mL)

 $400 \, \text{mL} / (40 \, \text{L})$

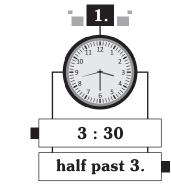
(1 kg)/10 kg

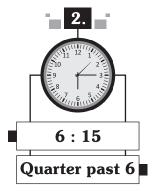
 $(750\,\mathrm{g})/10\mathrm{g}$

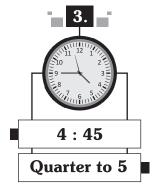
Chapter

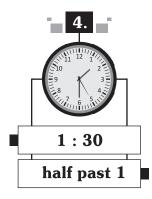
Roll Back

A.



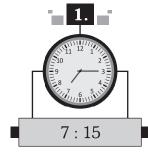


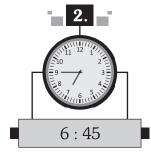




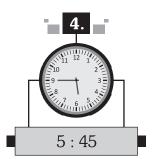
Time

В.









- C. 1. Teacher's day2. Independence day
 - 3. Children's day
 - 4. Christmas day
 - 5. Republic Day
 - 6. Gandhi Jayanti

5th September

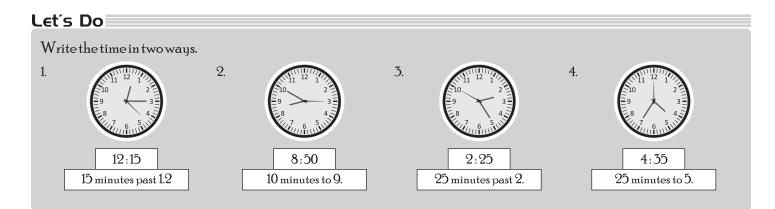
15th August

14th November

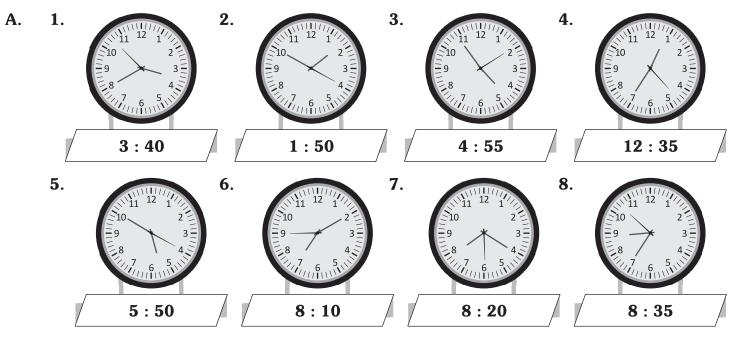
25th December

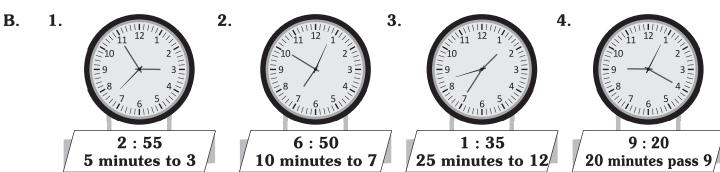
26th January

2nd October



Exercise 9.1







10:45 Quarter to 11



6.

11:15 Quarter past 11



3:30half past 3

- C. $1 \text{ to } 6 \Rightarrow 25 \text{ minutes}$ 1.
 - 4. $5 \text{ to } 11 \Rightarrow 30 \text{ minutes}$
- D. 1. Doing homework
 - 2. Sleeping in the night
 - 3. Brushing your teeth
 - 4. Taking bath
 - **5**. Playing with friends

- 2. $4 \text{ to } 9 \Rightarrow 25 \text{ minutes}$
- **5**. $6 \text{ to } 12 \Rightarrow 30 \text{ minutes}$

7.

6. $7 \text{ to } 12 \Rightarrow 25 \text{ minutes}$

3.

1 hour/10 hours

8 minutes/8 hours

3 mir/utes/3 hours

5 mir/utes/5 hours

2 minutes/2 hours

Exercise 9.2

- A. 5 o' clock in morning 1.
- = 5:00 a.m. 2.
- Quarter to one during noon = 12:45 p.m.

- **3**. 4:40 in the afternoon
- = 4:40 p.m. 4.Eleven at night
- = 11:00 p.m.

 $3 \text{ to } 11 \Rightarrow 40 \text{ minutes}$

- Half past four in the evening = 4:30 p.m. 6.
- = 4:05 a.m.4:05 after midnight

- I go to school at 7 a.m./p.m. В. 1.

 - 3. I go to play at 3 a.m./p/m.
 - I take dinner at 8 p.m./a.m.

- I come back from school at 1 p₄m./a.m.
- 4. My father watches the evening news at 7 a.m./p**/**m.
- Igo to bed at 10 a.m./p/m.

Exercise 9.3

- A. 1. 7 hours \Rightarrow \therefore (1 hour = 60 minutes)
 - \therefore 7 hours = (7×60) min

 $=420 \, \text{min}$

- : (1 hour = 60 min) 2. 19 hours \Rightarrow
 - \therefore 19 hours = (19 × 60)

min = 1140 min

3. 5 hours 15 minutes \Rightarrow :: (1 h = 60 min)

∴ 5 h 15 min

 $= (5 \times 60) \min + 15 \min$

 $= 300 \, \text{min} + 15 \, \text{min}$

 $=315 \, \text{min}$

4. 9 hours 20 minutes \Rightarrow :: (1 h = 60 min)

∴ 9 h 20 min

 $= (9 \times 60) \min + 20 \min$

 $= 540 \, \text{min} + 20 \, \text{min}$

 $= 560 \, \text{min}$

5. 12 hour 10 minutes \Rightarrow : (1 h = 60 min) ∴ 12 h 10 min

 $= (12 \times 60) \min + 10 \min$

 $= 720 \, \text{min} + 10 \, \text{min}$

 $=730 \, \text{min}$

6. 6 hours 30 minutes \Rightarrow :: (1 h = 60 min)

∴ 6 h 30 min

 $= (6 \times 60) \min + 30 \min$

 $= 360 \, \text{min} + 30 \, \text{min}$

 $=390 \, \text{min}$

B. 1. Duration of movie in hours

= 2 hours 15 minutes

So, the Duration of movie in minutes

 $= 2 \times 60 \,\mathrm{min} + 15 \,\mathrm{min}$

(: 1 hour = 60 minutes)

 $= 120 \, \text{min} + 15 \, \text{min}$

 $= 135 \, \text{min}$

- 2. Time marathon in hours
 - = 5 hours 26 minutes

MATHEMATICS-3

150

Time marathon in min =

 $5 \times 60 \, \text{min} + 26 \, \text{min}$

(: 1 hour = 60 minutes)

 $= 300 \, \text{min} + 26 \, \text{min}$

 $=326 \min$

So, the athlete complete the race in 326 minutes.

3. Scheduled time of train

 $= 12:15 \, pm = 1215 \, hour$

Time of reaching station

 $= 1:30 \, pm = 1330 \, hour$

Late timing = (1330 - 1215) hour

 $= 115 \, \text{hour}$

= 1 hour + 15 min

∴ Late timing in minutes

 $= (1 \times 60) \min + 15 \min$

 $=60 \min + 15 \min$

 $=75 \, \text{min}$

So, we late by 75 minutes.

4. Reaching time of grandmother's house in hours

= 3 hour 30 minutes

Reaching time of grand mothers house in minutes

 $= 3 \times 60 \, \text{minutes} + 30 \, \text{minutes}$

 $= 180 \, \text{minutes} + 30 \, \text{minutes}$

= 210 minutes.

Tricky Maths

How much time does she take to go to school?









2 hours 5 minutes

Surekha wakes up at: 6:10 a.m.

She has reached school at:8:15 a.m.

Exercise 9.4

- **A. 1.** The first day of the year is **Monday**.
 - 2. Children's day is on **Thursday**, **14th November**.
 - **3.** There are **four** Sundays in January.
 - **4.** My summer vacations start on 5th May and end on 2nd July. My vacations are for **58** days.
 - **5.** The eighth month of the year is **August**.
 - **6.** Write the name of any one month which has 5 Sundays **March**.
 - **7.** When is your birthday? Which day is it this year? **Do yourself**.
 - **8.** On which day is Independence Day? **Thursday**.

L∈t´s Do≣

1. $8 \text{ months} = (8 \times 30) \text{ days} = 240 \text{ days}$

2. 6 weeks and 2 days = (6×7) days + 2 days

= 42 days + 2 days = 44 days

 $3. \quad 8 \, \text{days} = (8 \times 24) \, \text{hours} \qquad = \quad 192 \, \text{hours}$

4. $3 \text{ days and } 6 \text{ hours} = (3 \times 24) \text{ hours} + 6 \text{ hours}$

= 72 hours + 6 hours

= 78 hours

Exercise 9.5

1. 6 months 2 weeks. A.

> = (6×30) days + (2×7) days

(1 month = 3 days)

 $180 \, \text{days} + 14 \, \text{days}$ =

(1 week = 7 days)

194 days

2. February + 3 weeks + 20 days (1 Week = 7 day)

 $28 \, \text{days} + (3 \times 7) \, \text{days} + 20 \, \text{days}$

 $28 \, \text{days} + 21 \, \text{days} + 20 \, \text{day}$ =

69 days

3. May + June + July

 $31 \, \text{days} + 30 \, \text{days} + 31 \, \text{days}$

92 days

4. April + 9 days

 $30 \, \text{days} + 9 \, \text{days}$

39 days

В. 1. 2 days (2×24) hours (1 day = 24 hours)

48 hours =

2. 1 week = 7 days1 week

 $7 \, \text{days} = 7 \times 24 \, \text{hours}$ (1 day = 24 hours)

168 hours

3. 2 and half a day = 2 day + 1/2 day

> (2×24) hour $+ 1/2 \times 24$ hour (1 day = 24 hours)

48 hour + 12 hour = 60 hours

4. $10 \, \text{days} + 10 \, \text{hours}$

> $10 \times 24 \text{ hours} + 10 \text{ hours}$ (1 day = 24 hours)

240 hours + 10 hours = 250 hours

Period for which electricity stopped C. 1.

Half a day and 2 hours $(1/2 \times 24)$ hours + 2 hours =

Period in hours 12 hours + 2 hours

> 14 hours =

2. Period of Summer vacations

May + June + First week of July =

Period of vacations in days $31 \, days + 30 \, days + 7 \, days$ =

68 days

Mental Maths Conrner

MCQs

2. 3. 1. c. b. b. 4. a. 5. b.

NEP Computational and Analytical Thinking















6:00 a.m. Time

Time 10:00 p.m.

4:30 p.m. Time

4.





7:00 a.m.



8:25 p.m. Time





Time

6.

6:00 a.m.

HOTS QUESTION

Time

Vincent reached home from work = at 5 in the evening

=5:00 p.m.

Shewenttosleep = at 6:00 p.m.

And, she woke up fresh the next morning at 5:00 a.m.

Now, 6:00 p.m. +6 hours $\rightarrow 12:00$ noon +5 hours $\rightarrow 5:00$ a.m.

= 6hours + 5hours Time duration of sleeping

= 11hours

Hence, vincent sleep for 11 hours.

Chapter



Money

Roll Back

1.

A. Do yourself.

B. Do yourself.

C.









2.







₹ 22

₹ 62

Let's Do

How much money do they have?

Notes And Coins

In Figures

Sonam









₹250.50

Ranbeer	3 A CODOO 3 So GOODS	₹ 506.50
Anuj	The state of the s	₹602

Exercise 10.1

A	١.

1.

2.

3.

4.

5.

Amount		Amount in words	
In Paise	In Rupees	Amount in words	
520 р	₹ 5.20	Five rupees twenty paise	
7050p	₹ 70.50	Seventy rupees fifty paise	
1010p	₹ 10.10	Ten rupees ten paise	
315p	₹ 3.15	Three rupees fifteen paise.	
1925 р	₹ 19.25	Nineteen rupees twenty-five paise.	

B. 1. ₹6.00 =
$$(6 \times 100) p$$
 = **600 p** $(\because ₹1 = 100 0)$

2.
$$\not\in 4.05 = (4.05 \times 100) \,\mathrm{p} = 405 \,\mathrm{p}$$

 $(\because \not\in 1 = 100 \,\mathrm{0})$

3.
$$\stackrel{?}{=} 99.95 = (99.95 \times 100 \,\mathrm{p}) = 9995 \,\mathrm{p}$$

 $(\because \stackrel{?}{=} 1 = 100 \,\mathrm{0})$

4. ₹21.90 =
$$(21.90 \times 100) p = 2190 p$$

 $(∵₹1 = 100 0)$

5. ₹ 14.25 =
$$(14.25 \times 100) p =$$
1425 p $(\because ₹ 1 = 100 0)$

6. ₹39.65 =
$$(39.65 \times 100) p =$$
3965 p $(\because ₹1 = 1000)$

7. ₹13.30 =
$$(13.30 \times 100)$$
 p = **1330 p** $(\because ₹1 = 1000)$

8.
$$\stackrel{?}{=} 20.75 = (20.75 \times 100) p = 2075 p$$

 $(:: \stackrel{?}{=} 1 = 100 0)$

9.
$$\not\equiv 10.00 = (10 \times 100) \,\mathrm{p} = \mathbf{1000} \,\mathrm{p}$$

 $(\because \not\equiv 1 = 1000)$

2.
$$640 \,\mathrm{p} = 80.90 = (600 \div 100) = 100$$

3.
$$1000 \,\mathrm{p} = ₹ (1000 \div 100)$$

 $(\because 100 \,\mathrm{p} = ₹ 1)$

$$4. 900 p = ₹ 10.00
= ₹ (900 ÷ 100)
= (∵ 100 p = ₹ 1)
= ₹ 9.00$$

5. 515 p = ₹ (500 ÷ 100)
= (
$$\because$$
 100 p = ₹ 1)
= ₹ **5.15**

6.
$$1010 p = (1010 \div 100)$$

= $(\because 100 p = ₹1)$
= ₹ **10.10**

7. 9995 p =
$$(9000 \div 100)$$

= $(\because 100 \text{ p} = ₹ 1)$
= ₹ 99.95

8. 990 p =
$$(990 \div 100)$$

= $(100 \text{ p} = 1)$
= 990 p

9.
$$8005 p = ₹ (8000 ÷ 100)$$

= $(∵ 100 p = ₹ 1)$
= ₹ **80.05**

Tricky Maths

Ankur has money = 7 rupees 90 paise

=₹7.90

Soni has money

=₹7.95

And, Vivek has money = 715 paise

= ₹ (715 ÷ 100) (∵ ₹1 = 100 p)

= ₹ 7.15

: 7.15 < 7.90 < 9.95

Hence, Soni has the most money.

Life Skill

Do yourself.

Let's Do

A. Add:

B. Subtract:

Exercise 10.2

A. 1.

₹ 158.50 + ₹ 71.50

₹ 93 + ₹ 24.25

₹ 36 + ₹ 115.50

В. 1.

₹ 7 0 . 5 0 +₹ 3 5 . 5 0 ₹ 3 5 . 0 0 2.

0 0 0 1 4 0 . 0 0 8 5 . 0 0 25.00

₹ 3 2 . 0 0

-₹11.50

₹ 2 0 . 5 0

3.

§ 6 3 . 2 5 -₹25.50 ₹ 3 7 . 7 5

4.

₹25-₹17

(1) (15) ₹ 2 5 - ₹ 1 7 0 8

5.

₹32-₹11.50

6.

₹62.25-₹18.50

₹ 6 2 . 2 5 -₹18.50 ₹ **4 3** . **7 5**

7.

₹84.50 - ₹43.75

₹ 8 Å . 5 Ø -₹43.75 ₹ 4 0 . 7 5

8. ₹201 – ₹152.25

> 1 5 2 . 2 5 48.75

9.

₹110.50-₹93.75

93.75 16.75

C. 1.Cost of a geometry box = ₹ 18.90

Cost of a pen

.. Kamini needs money for purchasing these items = ₹ (18.90 + 6.70) = ₹25.60

. 9 0 6 . 7 0 ₹ 2 5 . 6 0

₹ \$ \text{0} \ \text{ -₹26.50 ₹ 2 3 . 5 0

So, Kamini needs ₹25.60.

2. Cost of a book

= ₹ 13.90 = ₹ 70.60

Money gave to shopkeeper .. Money is left with me

= ₹70.60 - ₹13.90

= ₹56.70

₹6.70

€ 7 0 . 6 0 +₹13.90 ₹ **5** 6 . **7** 0 So, ₹23.50 is left with sammer's mother.

Money spend on a toy = ₹30.75 Money left with Ram = ₹28.50

 \therefore Ram had money at first = 30.75 + 28.50

= 59.25

₹ 3 0 . 7 5 +₹28.50 ₹ 5 9 . 2 5

Hence, ₹56.70 money is left with me.

3. Sameer's mother give money = ₹50

School fee

=₹26.50

Money left with her = ₹50 – ₹26.50

=₹23.50

Ram had ₹59.50 at first.

5. Balvinder had money ₹ 15.25

His mother gave him ₹25.75

Now, he have money ₹ 15.25 + ₹ 25.75

₹41.00

₹ 1 5 . 2 5 +₹25.75 ₹ **4 1** . **0 0**

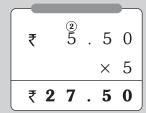
So, Balvinder has ₹41.00 now.

Let's Do

- A. Multiply:
 - 1.



2.



3.

- B. Divide:
 - 1. ₹57÷3

2. ₹80÷5

$$\begin{array}{c|c}
 & 16 \\
5 & 80 \\
 & -5 \\
\hline
 & 30 \\
 & -30 \\
\hline
 & 0
\end{array}$$

3. ₹504÷9

Exercise 10.3

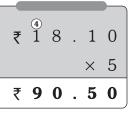
₹7.50 × 8

₹72×4

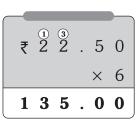
A. 1.



2.



3.



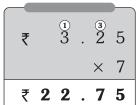
4. ₹38×3



5.

6.

7. ₹3.25 × 7



8.

9. ₹4.75×6



	_
	₹ 5
9)	₹ 45
	- 45
	0
ı	

C. 1. Cost of 1 pencil
$$= 34.50$$

∴ Cost of 8 pencils =
$$₹4.50 \times 8$$

= $₹36.00$



3. Cost of 7 crayons =
$$84$$

∴ Cost of 1 crayon =
$$₹84 \div 7 = ₹12$$

Thus, the cost of 8 pencils is ₹ 36.

∴ Cost of 7 balloons =
$$₹15.75 × 7$$

= $₹110.25$

Thus, the cost of 7 balloons is ₹ 110.25.

Thus, the cost of one crayon is ₹ 12.

4. Cost of 6 books =
$$₹ 150$$

$$\therefore \text{Cost of 1 book} = 7150 \div 6 = 25$$

25 6) 150 -12 30 -30 0

Thus, the cost of one book is
$$\stackrel{?}{\sim} 25$$
.

A.















₹ 38.00

₹ 45.00

₹ 10.00

₹ 12.50

₹ 0.50

₹ 70.00

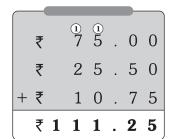
₹ 25.00

Simra	n Buys	Rajeev	v Buys
1 packet of sugar for 2 packets of milk for	₹ 38.00 ₹ 50.00	3 packets of salt for 4 packets of milk for	₹ 30.00 ₹ 100.00
1 packet of tea for	₹ 45.00	2 sugar packets for	₹ 76.00
1 loaf of bread for 4 toffees for	₹ 12.50 ₹ 2.00	1 bottle of jam for 2 loaf of bread for	₹ 70.00 ₹ 25.00
Amount paid =	₹ 147.50	Amount paid =	₹ 301.00

B. 1. Money spend on rides = ₹75 Money spend on games = ₹25.50

Money spend on food = ₹ 10.75

∴ Total money spend by him = ₹75 + ₹25.50+ ₹ 10.75



Hence, Deepak spend ₹ 111.25 in all actives.

2. = ₹37.90 Cost of geometry box Shahana gave money = ₹50 to the shop keeper

= ₹50-₹37.90 .. She get back money = ₹12.10

Hence, Shahana get ₹ 12.10 back from the shopkeeper.

3. Cost of 8 balls = ₹96

∴ Cost of 1 ball $= 796 \div 8 = 712$

		_
8)	12 96	
	- 8	
	16	
	<u> </u>	
	0_	

Hence, the cost of each ball is ₹ 12

4. Cost of 1 toffee = 50p

 \therefore Cost of 10 toffees = $\stackrel{?}{\cancel{\sim}} 0.50 \times 10 = \stackrel{?}{\cancel{\sim}} 5.0$

Hence, Ruchi paid ₹ 5 for the toffees.

5. Cost of the note book and story book = 700

Cost of the note book = ₹ 12.75

∴ Cost of the story book = ₹100 - ₹12.75

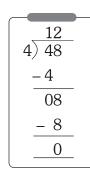
₹		8	7	2	5
– ₹		1	2	7	5
₹	@ 1	iğ O	10° O	10 O	10 O
				_	

So, the cost of story book is ₹87.25.

Cost of 1 pencil = ₹4 6.

Cost of a box of pencils = $\mathbf{7}48$

 \therefore Number of pencils in box = $48 \div 4 = 12$



Hence, there are 12 pencils in the box.

Tricky Maths

Put >, < or = sign in the box:

- 426_p (<) ₹42.60
- b.
- - 7178_p (=) ₹ 71.78
- c. 639p <
- ₹ 36.90

- d. ₹14.50 (<) ₹18.50
- ₹ 7.00
- (=) 500 p + 200 p

b.

₹10+₹20 (>) 300p

Mental Maths Conrner

MCQs

- 1. C.
- 2. b.
- 3.

- 4.
- a.

HOTS QUESTION



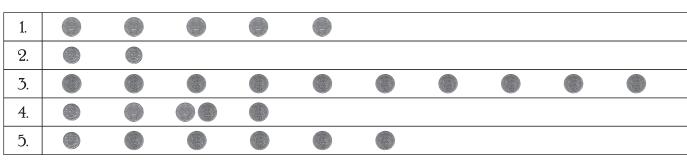
Fun Time -

How many ways can you make 10? You may use as many coins as you need from those given below. One is done for you:











Robby's bill

S.No.	Item	Quantity	Cost (₹)
1.	Ball	1	10.00
2.	Tops	2	10.00
3.	Toy car	1	12.00
4.	Pencils	4.00	
	To	₹ 36.00	

Minny's bill

S.No.	Item	Quantity	Cost (₹)
1.	Doll	1	25.00
2.	Teddy	1	35.00
3.	Sharpners	2	9.00
4.	Notebook	1	20.50
	То	₹ 89.50	

Chapter 1

Patterns

Roll Back

	Kilograms of food left at the end of										
Animals Week 1 Week 2 Week 3 Week											
Monkeys	30	20	10	0							
Lions	200	150	100	50							
Elephants	400	300	200	100							
Birds	16	12	8	4							

How much food did the zookeeper have at the beginning of Week 1?

Had **40** kilograms for the monkeys.

Had **250** kilograms for the lions.

Had **500** kilograms for the elephants.

Had **20** kilograms for the birds.

These patterns repeat. Can you draw the next ones?

1.

2.















These patterns keep increasing. Can you do the next one? 1. 2. These patterns keep decreasing. Can you do the next one? 1. 200 100 50 25 2. Exercise 11.1 1. 2. 4. **3**. **5**. **6**. **7**. 8. 9. (100)93 86 **10**. 107 Let's Do Tick(✓) the shapes that tile. 2. 1. 3. Exercise 11.2 A. 1. 2. В. Let's Do Drawtheline of symmetry for these figures. 1. 2. 3. MATHEMATICS-3 162

Exercise 11.3

A. 1.





4.



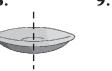
6.



7.



8.



9.





11.



12.



В. 1.



2.



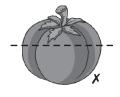
3.



4.



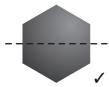
5.



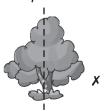
6.



7.



8.



Symmetrical figures are 1,3,4, and 7.

Tricky Maths

Observe the pattern and write the answer in the triangle. Do it mentally, don't use paper and pencil.





3

4

8

4

Exercise 11.4

- 1, 2, 4, A. 1.
- 8, 16, 32, 64
- 6, 13, 20, 2.
- 27, 34, 41, 48

- **3**. 86, 80, 74,
- **68**, **62**, **56**, **50**
- 4. 107, 114, 121,
- 128, 135, 142, 149

- **5**. 15, 30, 45,
- 60, 75, 90, 105
- 867, 767, 667, **6**.
- $\pmb{567}, \pmb{467}, \pmb{367}, \pmb{267}$

7. 8, 108, 208,

- 308, 408, 508, 608
- 1600, 800, 400, 8.
- 200, 100, 50, 25

В.

						95	101	107	113	119
					80	86	92	98	104	110
				65	71	77	83	89	95	101
			50	56	62	68	74	80	86	92
		35	41	47	53	59	65	71	77	83
	20	26	32	38	44	50	56	62	68	74
5	11	17	23	29	35	41	47	53	59	65

- **C.** 1. 1+3+5+7+9+11
 - **2.** 1+3+5+7+9+11+13
 - **3.** 1+3+5+7+9+11+13+15
 - **3.** 1+3+3+7+9+11+13+13
 - **4.** 1+3+5+7+9+11+13+15+17
- $= 6 \times 6 = 36$
- $= 7 \times 7 = 49$
 - $8 \times 8 = 64$
 - $9\times9 = 81$

Mental Maths Corner

MCQs

1. a.

2. c.

3. b.

Worksheet

1.







2.













- 3.



NEP Cross-Cultural Learning

1.















2.











3.











4.











5.











6.











Data Handling

Roll Back

A.

Object	Number of objects	Object		Number of objects
Ducks	3	Hens		4
Eggs	5	Fish	a Sie Lu	6
Flowers	7			

B. 1. There are **6** fish in all.

- 2. **Flowers** are maximum in number.
- 3. **Ducks** are minimum in number.
- 4. There are **7** birds in all.

Exercise 12.1

A. 1. What information does the pictograph give?

The pictograph shows the favourite subject of students of class 3 B.

2. What does each represent?

2 Students.

3. Which is the most popular subject?

Maths is the most popular subject.

4. What is the total number of students in class 3B?

Total number of students in class $3 B = 27 \times 2 = 54$ students.

B. 1. How many books were sold in the month of August?

Number of book sold in August = $31 \times 5 = 155$ books.

2. In which week were the maximum number of books sold?

The maximum number of books sold in 2nd week.

3. How many more books were sold in the 1st week than in the 3rd week?

Number of book sold in 1st week = 40

Number of book sold in 3rd week = 35

 \therefore Difference = 40 - 35 = 5 books

So, 5 books more sold in the 1st week than in the 3rd week.

C.	Class	● 5 Saplings
	Class I	
	Class II	
	Class III	
	Class IV	
	Class V	

Exercise 12.2

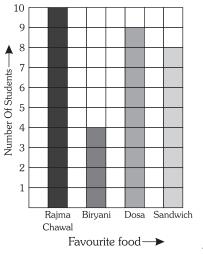
- **A.** Answer the questions that follow.
 - 1. Which food is liked by most of the students?
 - Rajma Chawal.
 - 2. Which food is liked by least number of students?

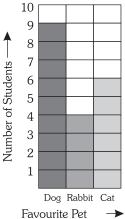
 Biryani.
 - **3.** How many students like Biryani?

4 students like biryani.

- **4.** How many more students like Dosa than Sandwich?
 - 1 students like Dosa more than sandwich.
- **B. 1.** Which is the most popular pet?
 - Dog is the most popular pet.
 - **2.** How many students like rabbits?
 - 4 students like rabbits.
 - **3.** How many more students like cat than dog?
 - 3 students like cat more than dog.
 - **4.** How many students in class III?

Total number of students in class III = 9 + 4 + 6 = 19 students.





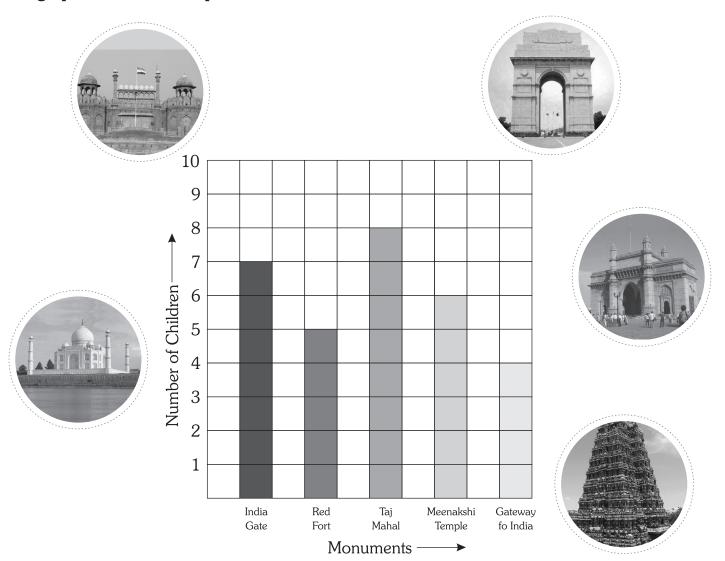
Mental Maths Conrner

MCQs

- 1. a. 2.
- 2. b.

NEP The 4Cs : Core Learning Skills

This bar graph shows the number of children who have visited various monuments. Study the bar graph and answer the questions that follow.



- 1. Which monument is visited by the most number of children?
- 2. Which monument is visited by the least number of children?
- 3. How many children visited Meenakshi Temple?
- 4. How many children visited Taj Mahal?
- 5. How many children visited the Red fort and the India Gate?

Taj Mahal

Gateway of India

6 children visited Meenaksi Temple.

8 Children visited Taj Mahal

Number of children visited red fort = 5

Number of children visited India gate = 7

 \therefore Total number of children visited the red fort and the India gate = 5 + 7 = 12 students.

Numbers beyond 999

Roll Back

Form numbers for each of the following:

- Ring the greatest number. Put a box around the smallest number. Also write in ascending order.
 - 1. 1158

|1307|

- (1591)4385
- 1236 (8411)
- 1161 6420
- 1158,
 - 1307,
- 1161, 4385,
- 1236, 6420,
- 1591 8411

3. 4834

2.

- 3484
- 4843
- (8434)
- 3484,
- 4834,
- **4843**,
- 8434

- Fill in the box.
 - 1. 2 | 4 | 6 | 9 60 400 2000
- 2. 8 8 4 4 80 800 5000
- 3. 0 0 0 0 0 6000

Tricky Maths

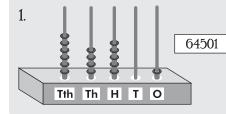
Circle the 5-digit numbers

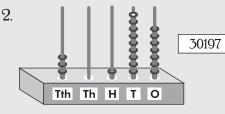
1640, (34560) (11101,) 6319,

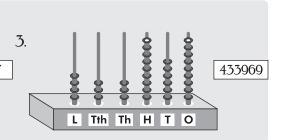
4341

Let's Do

Arrange the following numbers on the abacus:





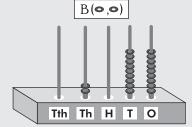


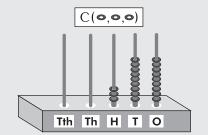
HOTS QUESTION 📆

Put the rings given in bracket A, B and C such that the number formed in A is the greatest and that formed in C is

the least. $A(\mathbf{o})$

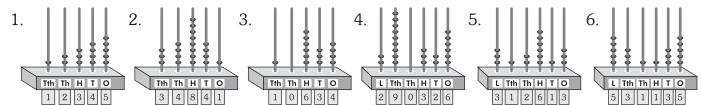
Tth Th H T O





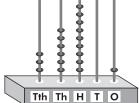
Exercise 1.1

A. Read the abacus and write the number.

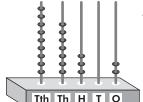


B. Show the following numbers on the abacus.

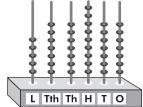




2. 97302



3. 577977



Let's Do≣

Mark the period in these numbers and read them aloud.

1. 437691

2. 379350

3. 879504

S.No.	Numbers	Lakhs	Thousands			Ones					
		L	TTh	Th	Н	Т	О				
1.	437691	4	3	7	6	9	1				
	Four lakh thirty-seven thousand six hundred ninety—one.										

2.	379350	3	7	9	3	5	0
		Three lakh seven	ity-nine thousa	nd three hund	red fifty.		

Three lakh seventy-nine thousand three hundred fifty.											
3.	879504	8	7	9	5	0	4				

Eight lakh seventy-nine thousand five hundred four.

Tricky Maths

Mark the periods in these numbers according to international system and read them aloud.

1. 294629

2. 1349629

3. 490491

S.No.	Numbers	Millions	Thousands				Ones	
		M	Hth Tth Th			Н	Т	О
1.	294629		2	9	4	6	2	9

Two hundred ninety-four thousand six hundred twenty-nine.

2.	1349629	1	3	4	9	6	2	9
		One million three	e hundred	fourty-ni	ne six hur	ndred twe	nty-nine.	
3.	490491		4	9	0	4	9	1

Four hundred ninety thousand four hundred ninety-one.

L∈t's Do≣

Write the number name for the numerals.

- 1. 4626481 = 4,626,481 =Four million six hundred twenty-six thousand four hundred eighty-one.
- **2. 8962092** = 8,962,092 = Eight million nine hundred sixty-two thousand ninety-two.
- **3. 7569282** = 7,569,282 = Seven million five hundred sixty-nine thousand two hundred eighty-two.

Exercise 1.2

A. Arrange the numbers in Indian place value chart. Rewrite them in blank spaces with commas at the right places.

S.No.	Numbers	Lakhs	Thousands			Ones	
		L	TTh	Th	Н	Т	О
1.	29,285		2	9	2	8	5
2.	2,47,158	2	4	7	1	5	8
3.	7,25,175	7	2	5	1	7	5
4.	9,28,750	9	2	8	7	5	0

B. Arrange the following in International place value chart. Rewrite them in blank spaces with commas at the right places.

Numbers	Millions		Thousands			Ones			
	НМ	TM	M	Hth	Tth	Th	Н	Т	О
78,517					7	8	5	1	7
9,32,429				9	3	2	4	2	9
51,72,359			5	1	7	2	3	5	9
13,327,458		1	3	3	2	7	4	5	8

MATHEMATICS-4 170

C. Write the number names in Indian system.

- 1. 53,125 Fifty-three thousand one hundred twenty-five.
- 2. 1,87,819 One lakh eighty-seven thousand eight hundred nineteen.
- 3. 9,27,471 Nine lakh twenty-seven thousand four hundred seventy-one.
- 4. 37,17,215 Thirty-seven lakh seventeen thousand two hundred fifteen.

D. Write the number names in International system.

- 1. 412,351 Four hundred twelve thousand three hundred fifty-one.
- 2. 167,897 One hundred sixty-seven thousand eight hundred ninety-seven.
- 3. 993,457 Nine hundred ninety-three thousand four hundred fifty-seven.
- 4. 123,456 One hundred twenty-three thousand four hundred fifty-six.

Exercise 1.3

A. Find the place value and face value of the coloured digit in the given numbers.

		Face value	Place value			Face value	Place value
1.	68 <u>,7</u> 91	7 ;	700	2.	2 <u>4</u> ,713	4 ;	4,000
3.	1,4 <u>7</u> ,518	7 ;	7,000	4.	3, <u>5</u> 6,346	5 ;	50,000
5.	<u>8</u> ,17,918	8;	8,00,000	6.	51,3 <u>2</u> 8	2;	20
7.	6,7 <u>,6</u> 32	6 ;	600	8.	9, <u>3</u> 6,518	3 ;	30,000

B. Write the expanded form of the following numbers.

- 1. 87,928 = **80,000** + **7,000** + **900** + **20** + **8**
- 2. 90,494 = **90,000** + **400** + **90** + **4**
- 3. 25,308 = **20,000** + **5,000** + **300** + **8**
- 4. 75, 173 = 70,000 + 5,000 + 100 + 70 + 3
- 5. 1,37,478 = 1,00,000 + 30,000 + 7,000 + 400 + 70 + 8
- 6. 3,47,785 = 3,00,000 + 40,000 + 7,000 + 700 + 80 + 5

C. Write the short form of the following numbers.

- 1. 70,000 + 5,000 + 60 **75,060**
- 2. 30,000 + 2,000 + 100 + 70 + 6 **32,176**
- 3. 60,000 + 5,000 + 400 + 80 + 7 **65,487**
- 4. 9,00,000 + 90,000 + 900 + 90 + 9 **9,90,999**
- 5. 4,00,000 + 400 + 40 + 4
- 6. 3,00,000 + 6,000 + 70 + 7 **3,06,077**

L∈t's Do≣

1. 36976

Compare each pair of numbers. Put =, > or < in the

compare even pair of numberor at , or in the

9246

- 4. 78605 < 87605 5. 93602 > 39206 6. 479200 = 479200

Exercise 1.4

A. Write the successor of:

39.000

We add 1 form 39,900 to get its successor.

$$39,900 + 1 = 39.901$$

So, successor of 39,900 is 39,901.

25,009

We add 1 form 25,009 to get its successor.

$$\therefore$$
 25,009 + 1 = 25,010

So, successor of 25,009 is 25,010.

B. Write the predecessor of:

57,000

We subtract 1 form 57,000 to get its predecessor.

$$\therefore$$
 57,000 - 1 = 56,999

So, predecessor of 57,000 is 56,999.

3. 34,498

We subtract 1 form 34,498 to get its. predecessor.

$$\therefore 34,498 - 1 = 34,497$$

So, predecessor of 34,498 is 34,497.

C. Write >, < or = in the boxes.

D. Arrange in ascending order.

Arrange in descending order.

2. 78.349

We add 1 form 78,349 to get its successor.

$$\therefore$$
 78,349 + 1 = 78,350

So, successor of 78,349 is 78,350.

1,23,478

We add 1 form 1,23,478 to get its successor.

$$\therefore$$
 1,23,478 + 1 = 1,23,479

So, successor of 1,23,478 is 1,23,479.

2. 92,450

We subtract 1 form 92,450 to get its predecessor.

$$\therefore$$
 92,450 - 1 = 92,449

So, predecessor of 92,450 is 92,449.

1,73,970

We subtract 1 form 1,73,970 to get its predecessor.

$$\therefore$$
 1,73,970 - 1 = 1,73,969

So, predecessor of 1,73,970 is 1,73,969.

4.
$$10,370 = 10,370$$



Do yourself.

Exercise 1.5

A. Write the smallest and greatest 5-digit number using each of the following digits only once.

Smallest number =
$$10237$$

Greatest number =
$$73210$$

		9, 7, 4, 2, 8;	
_		3, 1, 5, 9, 7;	
В.			est and greatest 6-digit number using each of the following digits.
		0, 8, 5, 3, 4;	
		2, 5, 0, 1, 4;	
•		4, 5, 7, 9, 3;	
C.			est 6-digits number using the digits 1, 3, 0, 5, 7 and 6 only once.
	Sm	allest number	= 103567 Greatest number $= 765310$
			Exercise 1.6
A.	Ro	und off to the	e nearest tens.
	1.	57	Here ones place is 7, which is bigger than 5.
			Thus, 57 will be round off to 60.
	2.	291	Here ones place is 1, which is smaller than 5.
	0	0.55	Thus, 291 will be round off to 290.
	3.	375	Here ones place is 5, which is equal to 5.
	4	000	Thus, 375 will be round off to 380.
	4.	983	Here ones place is 3, which is smaller than 5.
	5.	774	Thus, 983 will be round off to 980. Here ones place is 4, which is smaller than 5.
	J.	774	Thus, 774 will be round off to 770.
	6.	35876	Here ones place is 6, which is bigger than 5.
	0.	00070	Thus, 35876 will be round off to 35880.
В.	Ro	und off to the	e nearest hundreds.
_,	1.	719	Here tens place is 1, which is smaller than 5.
			Thus, 719 will be round off to 700.
	2.	983	Here tens place is 8, which is bigger than 5.
			Thus, 983 will be round off to 1000.
	3.	1185	Here tens place is 8, which is bigger than 5.
			Thus, 1185 will be round off to 1200.
	4.	6253	Here tens place is 5, which is equal to 5.
			Thus, 6253 will be round off to 6300.
	5.	8899	Here tens place is 9, which is bigger than 5.
		10005	Thus, 8899 will be round off to 8900
	6.	18997	Here tens place is 9, which is bigger than 5.
•	ъ	1 66 /1	Thus 18997 will be round off to 19000.
C.			earest thousands.
	1.	6938	Here hundreds place is 9, which is bigger than 5.
	2.	3278	Thus, 6938 is rounded off to 7000. Here hundreds place is 2, which is smaller than 5
	۷.	<i>321</i> 0	Thus, 3278 is rounded off to 3000.
	3.	9569	Here hundreds place is 5, which is equal to 5.
	٥.	7007	Thus, 9569 is rounded off to 10000.
			,

73 MATHEMATICS-4

4. 45817 Here hundreds place is 8, which is bigger that 5.

Thus, 45817 is rounded off to 46000.

5. 73417 Here hundreds place is 4, which smaller that 5.

Thus, 73417 is rounded off to 73000.

6. 99978 Here hundreds place is 9, which is bigger than 5.

Thus, 99978 is rounded off 100000

Exercise 1.7

Write the following in Roman numerals.

1. **19**
$$\Rightarrow$$
 10 + 9
= $X + IX$
= XIX

$$4. \quad \mathbf{40} \quad \Rightarrow \quad 50 - 10$$
$$= \quad \mathbf{XL}$$

7. **88**
$$\Rightarrow$$
 80 + 8
= $(50 + 30) + 8$
= $L + XXX + VIII$
= $LXXXVIII$

10. **96**
$$\Rightarrow$$
 90 + 6 = $(100 - 10) + 6$

$$\begin{array}{rcl}
2. & \mathbf{36} & \Rightarrow & 30 + 6 \\
 & = & XXX + VI
\end{array}$$

5. **66**
$$\Rightarrow$$
 60 + 6 = $(50 + 10) + 6$ = **LXVI**

8. **75**
$$\Rightarrow$$
 70 + 5
= $(50 + 20) + 5$
= $L + XX + V$
= $LXXV$

$$3. \quad \mathbf{39} \quad \Rightarrow \quad 30 + 9$$
$$= \quad XXX + IX$$

$$=$$
 XXXIX

6. **47**
$$\Rightarrow$$
 40 + 7
$$= XL + VII$$
$$= XLVII$$

9. **99**
$$\Rightarrow$$
 90 + 9
$$= (100 - 10) + 9$$

$$= XC + IX$$

$$= XCIX$$

$$XC + VI = XCVI$$

B. Write the following in Hindu-Arabic numerals.

$$1. \quad \textbf{XXIX} \qquad \Rightarrow \quad X + X + IX$$

$$= 10 + 10 + 9 = 29$$

90 + 3 = 93

$$= 10 + 10 + 9 =$$

$$= 50 - 10$$

$$= X + X + X + VI$$

= $10 + 10 + 10 + 6 = 36$

3. **XL** =
$$50-10$$
 4. = **40**

4. **XLVI** =
$$XL + VI$$

= $(50 - 10) + 6$

=

$$= L + X + X + X + III \qquad 6.$$

$$=$$
 40 + 6 = **46**
 $=$ L + X + X + I

5. **LXXXIII** =
$$L + X + X + X + III$$

= $50 + 10 + 10 + 10 + 3$
= **83**

$$= L + X + X + I = 50 + 10 + 10 + 1$$

7. **LXI** =
$$L + X + I$$
 = $50 + 10 + 1 = 61$

$$= (100 - 10) + 5$$
$$= 90 + 5 = 95$$

9. **XCIII** =
$$XC + III$$
 = $(100 - 10) + 3$

=

$$= XL + 1 = (50 - 10) + 1$$

$$=$$
 40 + 1 = 41

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (a)

3. (c)

4. (a)

NEP Multiple Intelligence

a→ 1	b ↓ 4		ç→ 6	1	
	0		6		d ↓ 1
				e→ 3	1
	f→ 7	7		8→ 4	6
h ↓ 8		i→ 5	j ↓ 4		
2			k→ 9	5	

A	Across ——		Down↓
(a)	X + IV	(P)	L-X
(c)	LX + I	(c)	LX + VI
(e)	XX + XI	(d)	CX + VI
(f)	L + XXVII	(h)	LXXX + II
(g)	XL + VI	(j)	XL + IX
(i)	L+IV		
(k)	XC + V		

Worksheet

To find the flowering punch line, solve the problems below. (Read the clues.)

Class	Number	Corresponding Letter
1. Subtract I from L	XI – III = VIII	v
2. Divide O by I	IX ÷ III = III	I
3. Multiply I By I	III × III = IX	0
4. Add V and I	VIII + III = XI	L
5. Multiply N By T	$V \times II = X$	E
6. Divide E by N	$X \div V = II$	Т
7. Subtract T from O	IX – II = VII	S
8. Add S and T	VII + II = IX	0
9. Subtract I from V	VIII – III = V	N
10. Subtract O from L	XI - IX = II	T
11. Add I to N	III + V = VIII	V

Punch Line

V	I	О	L	E	T	S

О	N
---	---

T V

Roll Back

A. Count and fill in the blanks.

- 56 1. +18 74 =
- 2. 123 456 +579
- 3. 437 149 +
- addends are
- addends are

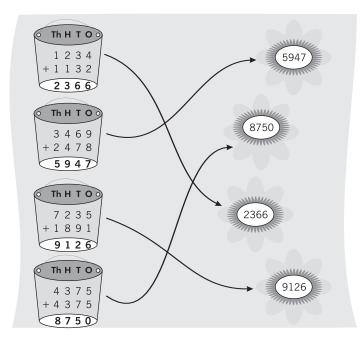
586

56

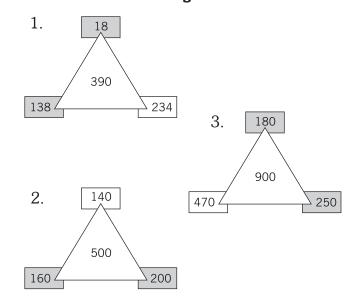
123

- 18
- and sum
- 74 579
- 456 and sum
- 149 addends are 437 and sum 586

Match the following buckets to the correct flower.



C. The sum of the three numbers at the corners of a triangle is written inside the triangle. Fill in the blank box in each of the following.



Let's Do≣

Add:

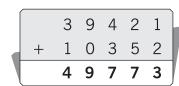
2.

3.

Exercise 2.1

A. Add.

1.



2.

3.

Т		8	7	8	9	6
	+	3	4	6	4	2
		5	3	2	5	4

4.

		8	6	7	7	8
L	+	5	1	0	0	2
J			2	4	2	0
		3	3	3	5	6

5.

	6	8	5	8	8
+		3	0	2	4
	2	5	3	2	1
	4	0	2	4	3

6.

7 2 3 + 5 0 2 1
7 2 3
5 1 1 2 3

B. Find the sum:

Add: 12343 and 31205

2. Add: 3456, 23201 and 361222

3. Add: 201234, 312345 and 123410

4.

Add: 712345, 214312 and 1022

5. Add: 103264, 200513 and 386101

		1	0	3	2	6	4
		2	0	0	5	1	3
۱	+	3	8	6	1	0	1
		6	8	9	8	7	8

6. Add: 437105, 141410, and 20015

C. Fill in the blanks.

Step 1. Add the ones:

$$= 5 + 3 = 8$$

 $= 9 - 7 = 2$

$$\therefore 7 + 2 = 9$$

Step 2. In tens. **Step 3.** In hundreds

$$= 8 - 4 = 0$$
 : $4 + 4 = 8$

Step 4. Add the thousands = 8 + 0 = 8

$$-8 \pm 0 - 8$$

+ | 2 | 0 | 4 | 2 | 8 8

Step 5. In ten thousands
$$= 5 + 0 = 3$$

2. **Step 1.** In ones:

$$= 5 - 3 = 2$$
 : $2 + 3 = 5$

Step 2. In tens: **Step 3.** In hundreds:

$$= 7 - 4 = 3$$
 : $4 + 3 = 7$

$$= 6 - 4 = 2$$
 : $2 + 4 = 6$

Step 4. Add thousands

$$= 3 + 3 = 6$$

Step 6. In lakh

Step 5. In ten thousands

$$= 8 - 3 = 5$$

$$= 8-3=5$$
 $\therefore 3+5=8$
 $= 9-2=7$ $\therefore 2+7=9$

7 3 3 2 4 2 5 3 3 | 3 9 8 6 5

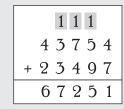
7 5

8

L∈t's Do≡

Add:

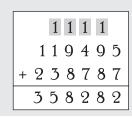
1.



2.

	1	1	1	1		
	1	9	7	6	3	
+	2	4	5	9	8	
	4	4	3	6	1	

3.



4.

	1	1	1			
	3	7	9	4	5	0
+	4	3	5	8	1	9
	8	1	5	2	6	9

Exercise 2.2

A. Add.

1.

2.

3.

4.

5.

6.

B. Find the sum.

1.

Add: 21987, 1832 and 59909

2.

Add: 326532, 538495 and 56434

3.

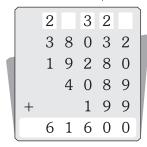
Add: 3785, 108, 4789 and 15064

4.

Add: 526532, 326064 and 122565

5.

Add: 38032, 19280, 4089 and 199



6.

Add: 438102, 43324 and 254126

	1	1			1	
	4	3	8	1	0	2
		4	3	3	2	4
+	2	5	4	1	2	6
	7	3	5	5	5	2

The greatest 5-digit number in which each digit is greater that the one before it is 56789.

Tricky Maths

Fill the missing number:

1. 3 8 4 7 5 + 2 0 4 2 3 5 8 8 9 8 3. 3 2 5 2 2 3 + 2 3 3 4 2 5 5 5 8 6 4 8

Exercise 2.3

A. Fill in the blanks.

1.
$$46481 + \mathbf{0} = 46481$$

$$2. \quad 53486 + 0 =$$
53486

$$3. \quad 14357 + 19235 = 19235 + 14357$$

4.
$$83547 + (35485 + 1000) = (83547 + 1000) + 35485$$

$$5. \quad 28254 + 419450 = 419450 + 28254$$

6.
$$(112000 + 135400) + 234567 = 112000 + (135400 + 234567)$$

Let's Do≣

Fill in the blanks.

1.
$$4752 - 0 = 4752$$

5.
$$743 - 743 = 0$$

7.
$$3752 - 1 = 3751$$

4.
$$7000 - \mathbf{0} = 7000$$

10.
$$0 - 0 = 0$$

Exercise 2.4

- 1. Boxes made by factory in first month = 6000

 Boxes made by factory in second month = 10252

 Boxes made by factory in third month = 9278
 - \therefore Total Boxes made in these months = 6000 + 10252 + 9278

= 25530

Thus, the factory made 25530 boxes in three months.

- **2.** Milk sold by the dairy in first week = 10045 L Milk sold by the dairy in second week = 11650 L
 - \therefore Total quanity of milk sold by the dairy in 2 weeks = (10045 + 11650) L

= 21695 L

Thus, the dairy sold 21695 L of milk sold by the dairy in 2 week.

- **3.** Production of white cloth = 21065 m
 Production of printed cloth = 57028 m
 Production of coloured cloth = 18205 m
 - \therefore Total production of cloths = (21065 + 57028 + 18205) m = 96298 m

Thus, 96298 m of cloth was produced by the mill.

- 4. Production of sugar in February = 24705 kg
 Production of sugar in March = 16020 kg
 Production of sugar in April = 30750 kg
 - Total production of sugar in both 3 month = (24705 + 16020 +

30750) kg = 71475 kg

Thus, the factory produced 71475 kg of sugar in 3 months.

- **5.** Distance covered by whale in January = 122934 km
 Distance covered by whale in February = 137440 km
 Distance covered by whale in March = 89745 km
 - \therefore Total distance covered by the whole = (122934 + 137440)

in both three months + 89745) km = 350119 km

Thus, the total distance covered by the whale is 350119 km.

Mental Maths Corner (MCQs)

Tick (✓) the correct answer.

1. (c)

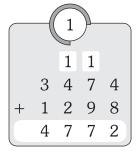
2. (d)

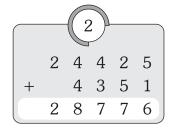
3. (a)

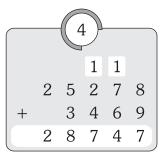
4. (d)

NEP The 4Cs : Core Learning Skills

Find the sum.







1 0 2 5 2 + 9 2 7 8 2 5 5 3 0 1 0 0 4 5 1

6 5 0

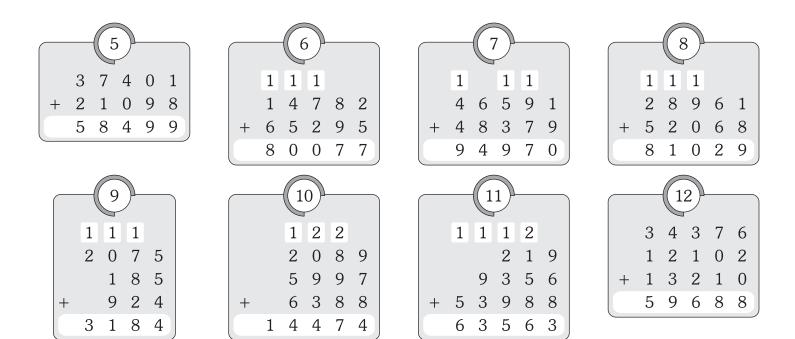
2 1 6 9 5

1 1

1 1 6 0 0 0

		1			1		`
		2	1	0	6	5	
		5	7	0	2	8	
ı	+	1	8	2	0	5	
		9	6	2	9	8	

		1	1				
		2	4	7	0	5	١
		1	6	0	2	0	ı
۱	+	3	0	7	5	0	ı
		7	1	4	7	5	



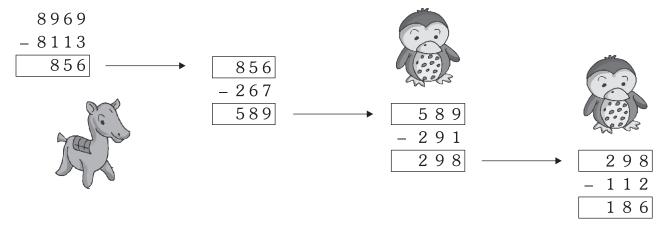
Chapter

3

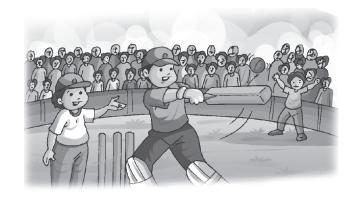
Subtraction

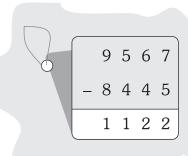
Roll Back

A. Fill in the boxes to reach the final answer.



B. The final match of cricket tournament is being played between India and Australia in Delhi. Many people have come to cheer up the teams. There are 9567 people in all, out of which 3445 are men. How many women have come to see the match?





Let's Do

Subtract.

1.

2.

3.

4.

	900000
-	400000
	500000

Exercise 3.1

A. Subtract.

1.

3.

4.

5.

2.

6.

B. Find the difference:

Difference between 64,896 and 53,421.

2. Difference between 3,43,534 and 6,76,698.

Difference between 36,437 and 46,787.

Difference between 2,43,321 and 5,66,438 4.

Difference between 63,569 and 64,679.

Difference between 3,86,599 and 4,97,699. 6.

C. Fill in the blanks.

1.

Step 1. In ones : 5 - 3 = 2

Step 2. In hundreds : 6 - 4 = 2

Step 3. Subtract the thousands : 8 - 6 = 2

Step 4. In ten thousands : 6 - 4 = 2

3. Step 1. In ones 2 + 1 = 3

Step 2. In tens = 5 - 2 = 3

Step 3. In hundreds = 2 + 3 = 5

Step 4. In thousands 5 - 4 = 1

Step 5. In ten thousand = 5 + 2 = 7

Step 6. Subtract lakh = 5-3=2

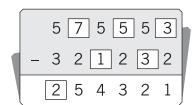
Step 1. In ones : 6 + 3 = 9

Step 2. subtract tens = 8 - 2 = 6

Step 3. In hundreds = 6 - 4 = 2

Step 4. Subtract thousands = 6 - 2 = 4

Step 5. In ten thousands = 2 + 3 = 5



Tricky Maths

- 1. 3 tens + 8 ones = 2 tens + 18 ones.
- 3. 5 thousand +8 hundreds = 4 thousand +18 hundreds

2. 2hundreds + 5 tens = 1hundred + 15 ones

6.

Exercise 3.2

A. Subtract.

5.

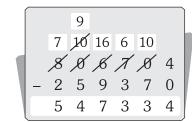
B. Find the difference:

1. Difference between 48369 and 15467.

2. Difference between 640293 and 462397.

3. Difference between 415824 and 137469

4. Difference between 806704 and 259370



5. Difference between 300000 and 198765



6. Difference between 800000 and 349730

Exercise 3.3

Fill in the boxes.

$$1. \boxed{14,172 - 0 = \boxed{14,172}}$$

$$3. \quad 97,233 - \boxed{1} = 97,232$$

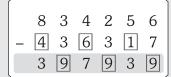
$$5. \quad 47,235 - 47,235 = \boxed{0}$$

- 2. 72,999 1 = 72 72,998
- 4. $6,14,234 \boxed{0} = 6,14,234$
- $6. \quad 1,73,408 \quad \boxed{1,73,408} \quad = \quad 0$

HOTS QUESTION

Fill in the missing numbers.

 2.



3

Exercise 3.4

A. Estimate each difference to nearest ten. Compare with the actual difference.

1. Actual difference =

$$= 52 - 27 = 25$$

2. Actual difference =

$$= 80 - 38 = 42$$

To estimate 52 - 27; round off the numbers to the nearest ten and subtract.

$$52 \rightarrow 50$$

difference is about 20.

The estimate differ from the actual by only 5.

To estimate 80 - 38, round off the numbers to the nearest ten and subtract.

$$80 \rightarrow 80$$

difference is about 40.

The estimate differs from the actual by only 2.

$$\begin{bmatrix} 8 & 0 \\ - & 4 & 0 \\ 4 & 0 \end{bmatrix}$$

$$= 206 - 145 = 61$$

Actual difference =

$$= 914 - 276 = 638$$



To estimate 206 - 145; round off the numbers to the nearest ten and subtracts.

$$206 \rightarrow 210$$

$$145 \rightarrow 150$$

Difference is about 60.

The estimate differs

from the actual by only 1

6

To estimate 914 – 276, round off the numbers to the nearest ten and subtract.

$$914 \rightarrow 910$$

$$276 \rightarrow 280$$

Difference is about 630.

The estimate differs from the actual by only 8.



5. **Actual difference**

$$= 766 - 212 = 554$$

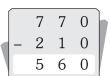
To estimate 766 - 212, round off the numbers to the nearest ten and subtract

$$766 \rightarrow 770$$

$$212 \rightarrow 210$$

Difference is about 560.

The estimate differs from the actual by only 6.



To estimate 6174 – 3318, round off the

	7	6	6
-	2	1	2
	5	5	4

B. Estimate each difference to the nearest hundred. Compare with the actual difference.

Actual difference

$$= 686 - 243 = 443$$

2. Actual difference

$$= 6174 - 3318 = 2856$$

numbers to the nearest

hundred and subtract.

		5	11	6	14
d		ß	1	7	A
I	_	3	3	1	8
		2	8	5	6

5 12

BZSS

3 3 0 0

To estimate 686 - 243, round off the numbers to the nearest hundred and subtract.

$$686 \to 700$$

Difference is about 400.

7 0 0 2 0 0 4 0

The estimate differs from the actual by 57.

$243 \rightarrow 200$

3. Actual difference

$$= 7521 - 1687 = 5834$$

			14	11		
		6	4	1	11	
		7	5	2	1	
۱	_	1	6	8	7	ı
١		5	8	3	4	l

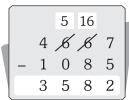
The estimate differs from the actual by 44.

 $6174 \rightarrow 6200$

 $3318 \rightarrow 3300$

$$= 4667 - 1085 = 3581$$

Difference is about 2900.



To estimate 7521 – 1687, round off the

numbers to the nearest hundred and subtract.

 $7521 \rightarrow 7500$

 $1687 \rightarrow 1700$

Difference is about 5800.

6 15 7 8 0 0 -1 70 0

The estimate differs from the actual by 34.

4. Actual difference

To estimate 4667 – 1085, round off the

numbers to the nearest hundred and subtract.

 $4667 \rightarrow 4700$

 $1085 \rightarrow 1100$

4 7 0 0 1 1 0 0 3 6 0

Difference is about 3600.

The estimate differs from the actual by 18.

5. Actual difference = 8492 - 5046 = 3446

To estimate 8492-5046, round off the numbers to the nearest hundred

and subtract.

 $8492 \rightarrow 8500$

 $5046 \rightarrow 5000$

Difference is about 3500.

The estimate differs from the actual by 54.

8 12 8 4 9 2 - 5 0 4 6 3 4 4 6

18

8 10

4 15 8

Exercise 3.5

1. Cost of a television set and a mobile phone = ₹55,990

Cost of mobile phone = ₹17,897

 \therefore Cost of television set = (55990 - 17897)

= ₹38093

Thus, the cost of the television set is ₹38093.

2. Annual income of Das = 3419,290

Annual income of Kabir = ₹5,860 less than

Das's income

So, Annual income of Kabir = ₹(4,19,290 - 5860) = ₹413430

Thus, the annual income of Kabir is $\stackrel{?}{\underset{?}{?}}$ 4,13,430.

8 12 4 1 8 2 9 0 - 5 8 6 0

4 1 3 4 3

3. One number = 49,553

Total sum of two numbers = 1,50,000

Then, second number = 1,50,000 - 49,553 = 1,00,447

Thus, 1,00,447 should be added to 49,553 to get 1,50,000.

4. Let the required number is x.

According to question,

3,56,435 - x = 2,38,595

Then, x = 3,56,435 - 2,38,595

= 1,17,840

Thus, 1,17,840 should be subtracted from 3,56,435 to get 2,38,595.

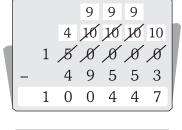
5. The difference of two numbers = 86,852

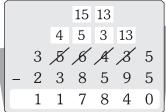
Then, the smaller number = (3,50,000 - 86,852)

= 2,63,148

= 3,50,000

Thus, the smaller number is 2,63,148.





14 9 9 9 9 2 4 10 10 10 10 10 8 8 8 8 5 2 2 6 3 1 4 8

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

The greater number

1. (d)

2. (b)

3. (a)

4. (c)

NEP Development of Traditional Knowledge

- The population of the most populated city is Ghaziabad = 9,68,521= 1,68,576The population of the least populated city is greater Noida
 - \therefore Difference between in both the city = (9,68,521 1,68,576) = 7,99,945

- 2. The population of Noida 2,93,908 2,28,820 The population of Gurgaon
 - (2,93,908 2,28,820).. Difference between in both the city
 - 65.088
- 3. The population of Faridabad 4,75,875 = The population of Greater Noida 1,68,576
 - :. Difference between in both the city (4,75,875 - 1,68,576)
 - 3,07,299 =
- The population of Noida 2,93,908 =The population of Ghaziabad 9,68,521
 - (9,68,521 293908).. Difference in between both the city
 - 6,74,613

	9	6	8	5	2	1	h
_	1				7		ľ
	7	9	9	9	4	5	
							,

2 9 3 9 0 8

2 2 8 8 2 0

6 5 0 8 8

- 4 7 5 8 7 5 1 6 8 5 7 6 3 0 7 2 9 9
- 9 6 8 5 2 1 2 9 3 9 0 8 6 7 4 6 1 3

Chapter

Multiplication

Roll Back

Multiply by expanding the bigger number.

Expanding form of 37 multiply by 4.

$$37 \times 4 = (30 + 7) \times 4$$

$$= (30 \times 4 + 7 \times 4)$$

$$=$$
 120 + 28

148

Expanding form of 25 multiply by 8 3.

$$25 \times 8 = (20 + 5) \times 8$$

$$= (20 \times 8 + 5 \times 8)$$

$$= 160 + 40$$

200

2. Expanding form of 91 multiply by 7 =

$$(90+1)\times 7$$

$$= (90 \times 7 + 1 \times 7)$$

$$=$$
 $(630 + 7)$

4. Expanding form of 18 multiply by 5

$$18 \times 5$$

$$(10 + 8) \times 5$$

$$= (10 \times 5 + 8 \times 5)$$

$$=$$
 50 + 40

5. Expanding form of 99 multiply by2

$$99 \times 2 = (90 + 9) \times 2$$

	1	
	9	9
	×	2
1	9	8

$$= (90 \times 2 + 9 \times 2)$$
$$= 180 + 18 = 198$$

7. Expanding form of 53 multiply by 6

$$\mathbf{53} \times \mathbf{6} = (50+3) \times 6$$

$$= (50 \times 6 + 3 \times 6)$$
$$= 300 + 18 = 318$$

6. Expanding form of 44 multiply by 9.

$$44 \times 9 = (40 + 4) \times 9$$

$$= (40 \times 9 + 4 \times 9)$$
$$= 360 + 36 = 396$$

8. Expanding form of 56 multiply by 8

$$56 \times 8 = (50 + 6) \times 8$$

$$= (50 \times 8 + 6 \times 8)$$

$$= 400 + 48 = 448$$

B. Fill in the

- 7. 1 2 3 × 3 3 6 9
- 8. 3 8 4 × 2 7 6 8

L∈t´s Do≣

Fill in the blanks.

1.
$$15 \times 1 = 15$$

2.
$$4 \times 0 \times 5 = 0$$

3.
$$27 \times 1 = 27$$

5.
$$1 \times 1 = 1$$

6.
$$0 \times 0 = 0$$

7.
$$14 \times 0 = 0$$

8.
$$(3 \times 4) \times 2 = (2 \times 3) \times 4$$

9.
$$1 \times 33 = 33$$

10.
$$16 \times 0 = 0$$

11.
$$15 \times 8 = 8 \times 15$$

12.
$$6 \times 5 \times 9 = 9 \times 6 \times 5$$

L€t's Do≡

Exercise 4.1

A. Fill in the blanks.

1.
$$361 \times 1 = \boxed{361}$$

3.
$$930 \times 0 = \boxed{0}$$

2.
$$111 \times 426 = 426 \times \boxed{111}$$

4.
$$569 \times 123 \times 437 = 437 \times 123 \times 120 \times 1$$

6.
$$381 \times \boxed{0} = 0$$

B. Find the product.

Tricky Maths

Fill in the blanks.

1.
$$1346 \times 6$$

3

6.

2. 4892×7

8.

Exercise 4.2

A. Multiply by expanding the bigger number.

312×7 1.

Expanding form of 312 multiply by 7

$$\therefore 312 \times 7 = (300 + 10 + 2) \times 7$$

$$= 300 \times 7 + 10 \times 7 + 2 \times 7$$
$$= 2100 + 70 + 14 = 2184$$

2. 152×3

Expanding form of 152 multiply by 3

$$\therefore 152 \times 3 = (100 + 50 + 2) \times 3$$



$$= 100 \times 3 + 50 \times 3 + 2 \times 3$$

$$= 300 + 150 + 6 = 456$$

3. **416 × 4**

Expanding form of 416 multiply by 4

$$\begin{bmatrix} & & 2 & \\ & 4 & 1 & 6 \\ & & \times & 4 \\ \hline 1 & 6 & 6 & 4 \end{bmatrix}$$

$$\therefore 416 \times 4 = (400 + 10 + 6) \times 4$$

$$= 400 \times 4 + 10 \times 4 + 6 \times 4$$

$$= 1600 + 40 + 24$$

$$= 1664$$

4. 1234×5

Expanding form of 1234 multiply by 5

$$\therefore 1234 \times 5 = (1000+200+30+4) \times 5$$

$$= (1000 \times 5 + 200 \times 5 + 30 \times 5 + 4 \times 5)$$

$$= 5000 + 1000 + 150 + 20$$

$$= 6170$$

5. **8579 × 2**

Expanding form of 8579 multiply by 2

$$\therefore (8579 \times 2) = (8000 + 500 + 70 + 9) \times 2$$

$$= (8000 \times 2 + 500 \times 2 + 70 \times 2 + 9 \times 2)$$

$$= 16000 + 1000 + 140 + 18$$

$$= 17158$$

1 1 1 9 9 8 5 7 9 × 2 1 7 1 5 8

6. **6135** × **8**

Expanding form of 6135 multiply by 8

$$\therefore (6135 \times 8) = (6000 + 100 + 30 + 5) \times 8$$

$$= (6000 \times 8 + 100 \times 8 + 30 \times 8 + 5 \times 8)$$

$$= 48000 + 800 + 240 + 40$$

$$= 49080$$

1 2 4 6 1 3 5 × 8 4 9 0 8 0

7. **2617** × **6**

Expanding form of 2617 multiply by 6

$$\therefore (2617 \times 6) = (2000 + 600 + 10 + 7) \times 6$$

$$= (2000 \times 6 + 600 \times 6 + 10 \times 6 + 7 \times 6)$$

$$= 12000 + 3600 + 60 + 42$$

$$= 15702$$

8. **5028 × 9**

Expanding form of 5028 multiply by 9

$$\therefore (5028 \times 9) = (5000 + 20 + 8) \times 9$$

$$= (5000 \times 9 + 20 \times 9 + 8 \times 9)$$

$$= 45000 + 180 + 72$$

$$= 45252$$

$\begin{bmatrix} & 7 & \\ & 5 & 0 & 2 & 8 \\ & \times & 9 \\ & 4 & 5 & 2 & 5 & 2 \end{bmatrix}$

9. **3678 × 6**

Expanding form of 3678 multiply by 6

$$\therefore (3678 \times 6) = (3000 + 600 + 70 + 8) \times 6$$

$$= 3000 \times 6 + 600 \times 6 + 70 \times 6 + 8 \times 6$$

$$= 18000 + 3600 + 420 + 48$$

$$= 22068$$

Let's Do

3.

 1123×10

1.
$$67 \times 40 = 67 \times 4 \times 10$$

2.
$$135 \times 20 = 135 \times 2 \times 10$$

$$=$$
 9863 × 10

5.
$$1030 \times 60 = 103 \times 10 \times 6 \times 10$$

6.
$$215 \times 90$$

$$=$$
 1935 × 10

19350

Exercise 4.3

A. Multiply

1.
$$64 \times 10 = 640$$

$$=$$
 $169 \times 2 \times 10$

$$= 338 \times 10$$

3.
$$410 \times 30 = 41 \times 10 \times 3 \times 10 = 4.$$
 486×50

$$= 486 \times 5 \times 10$$

$$= 123 \times 100$$

$$= 2430 \times 10$$

=
$$341 \times 10 \times 3 \times 10$$
 6. **1996 × 70**

$$= 1996 \times 7 \times 10$$

$$= 1023 \times 100$$

$$= 102300$$
 B. Find the product.

1.
$$136 \times 49$$

$$2. \quad 378 \, \times \, 32$$

 3410×30

1 2 0 9 6

		8	4	3
		×	1	8
	6	7	4	4
	8	4	3	0
1	5	1	7	4

4.
$$1539 \times 26$$

6.
$$2407 \times 35$$

7. 1234×48

	1	2	3	4
		×	4	8
	9	8	7	2
4	9	3	6	0
5	9	2	3	2

8. 2056×22

	2	0	5	6
		X	2	2
	4	1	1	2
4	1	1		0
4	5	2	3	2

9. 3087×37

		3	0	8	7
			X	3	7
	2	1	6	0	9
	9		6	1	0
1	1	4	2	1	9

Let's Do

1. 325×500

	1	2	
	3	2	5
		×	5
1	6	2	5

- $= 325 \times 5 \times 100$
- $= 1625 \times 100$
- = 162500

 $2. \quad 437 \times 300$

- $= 437 \times 3 \times 100$
- = 1311 × 100
- = 131100
- 4. $2627 \times 10 = 262700$

3. 1415 × 200

- $= 1415 \times 2 \times 100$
- = 2830 × 100
- = 283000

Exercise 4.4

A. Find the product:

1. **825** × **400**

- $= 825 \times 4 \times 100$
- $= 3300 \times 100$
- = 330000
- 4. 357×300

- $= 357 \times 3 \times 100$
- $= 1071 \times 100$
- = 107100

2. **534 × 600**

- $= 534 \times 6 \times 100$
- $= 3204 \times 100$
- = 320400
- 5. **513** × **700**
- 6. **6210** \times **100** = 621000

3. **895** \times **100** = 89500

- $= 513 \times 7 \times 100$
- $= 3591 \times 100$
- = 359100

- B. Find the product.
 - 1. **429 × 246**

			4	2	9
		×	2	4	6
		2	5	7	4
	1	7	1	6	0
	8	5	8	0	0
1	0	5	5	3	4

2. **809 × 312**

			8	0	9
		X	3	1	2
		1	6	1	8
		8	0	9	0
2	4	2	7	0	0
2	5	2	4	0	8

3. **516 × 170**

		5	1	6
	×	1	7	0
		0	0	0
3	6	1	2	0
5	1	6	0	0
8	7	7	2	0

4. **386** × **302**

			3	8	6
		X	3	0	2
			7	7	2
		0	0	0	0
1	1	5	8	0	0
1	1	6	5	7	2

5. **473 × 208**

		4	7	3
	×	2	0	8
	3	7	8	4
	0	0	0	0
9	4	6	0	0
9	8	3	8	4

6. **606 × 440**

			6	0	6
		×	4	4	0
			0		0
	2	4	2	4	0
2	4	2	4	0	0
2	6	6	6	4	0

7. **3257** × **181**

		3	2	5	7
		×	1	8	1
		3	2	5	7
2	6	0	5	6	0
3	2	5	7	0	0
5	8	9	5	1	7

8. **1629 × 214**

		1	6	2	9
		×	2	1	4
		6	5	1	6
	1	6	2	9	0
3	2	5	8	0	0
3	4	8	6	0	6

9. **1318 × 207**

		1	3	1	8
		×	2	0	7
		9	2	2	6
	0	0	0	0	0
2	6	3	6	0	0
2	7	2	8	2	6

10. **2795** × **244**

$\overline{}$					$\overline{}$
		2	7	9	5
		×	2	4	4
	1	1	1	8	0
1	1	1	8	0	0
5	5	9	0	0	0
6	8	1	9	8	0

11. **1615** × **301**

		1	6	1	5
		×	3	0	1
		1	6	1	5
	0	0	0	0	0
4	8	4	5	0	0
4	8	6	1	1	5

12. **1363** × **543**

		1	3	6	3
		×	5	4	3
		4	0	8	9
	5	4	5	2	0
6	8	1	5	0	0
7	4	0	1	0	9

Exercise 4.5

- A. Read carefully and solve. Remember to write statements, show working and give the answer.
 - 1. Days in a 1 year

= 365

∴ Days in 8 years

 $= 365 \times 8 = 2920 \text{ days}$

Thus, there are 2920 days in 8 years.

2. Money collection by Manoj from 1 member ₹1500 1 5 0 0 ... Money collection by Manoj from 9 member ₹1500 × 9 9 × ₹ 13500 1 3 5 0 0 Thus, Manoj collected ₹13500 from 9 members. 9 9 7 ₹997 3. Monthly fee of Vikrant \times 1 2 ₹997 × 12 = ₹ 11,964 .. Annual fee of Vikrant 9 9 4 1 Thus, Vikrant paid ₹11,964 as school fee for a year. 0 1 1 3 5 Number of trees in a row 135 \times 3 2 32 Number of rows 2 7 0 .. Total number of trees planted = $135 \times 32 = 4320$ 4 0 5 0 Thus, 4320 apple trees will be planted in 32 such rows. 4 3 2 1 2 7 9 2 6 × 5. ₹1279 Cost of a bicycle 6 7 7 ₹1279 × 26 .. Cost of 26 bicycles 5 5 8 0 ₹ 33254 3 3 2 5 Thus, the cost of 26 bicycle's is ₹33254. Number of heat beats in a minute 6. 72 1 4 4 0 Number of minutes in a day 60×24 = × 7 1440 min 2 8 8 0 (: 1 day = 24 hours,1 0 0 8 0 0 1 hour = 60 min0 3 8 ... Number of heart beats in a day $1440 \times 72 = 103680$. =So, Normally human heart beats 103680 times in a day. 3 3 Distance in between place A to place B = 1980 km 9 8 0 Here: 1 round trip between A and B means going form A to B and then coming back B to A. So; 2 round trip between A and B means going form A to \times 4 B and then coming back B to A two times 2 0 Than, distance covered by the plane in two round trips $(1980 \times 4) \text{ km}$ 7920 km. 1 2 8 8 1 5 7 Weight of 1 watermelon 1288 grams Number of watermelons 157 6 4 4 0 0 .. Weighs of 157 watermelons (1288×157) grams 1 2 8 8 0 0 202216

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (b)

2. (b)

Thus, the weight of 157 watermelons is 202216 kg.

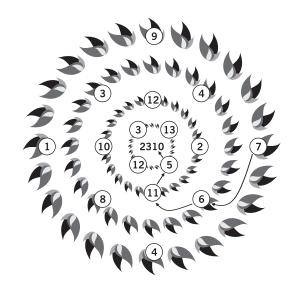
3. (a)

4. (b)

0 2 2

NEP Computational and Analytical Thinking

There is a thief hiding at the centre of the circle. There is only one correct path to approach the centre of this circle. The path can be found by multiplying the numbers on the doors one passes through. When one reaches the centre, the product must be 2310. Help the policeman catch the thief.

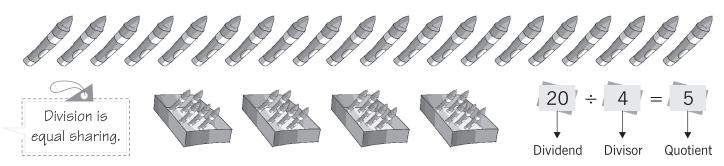


Chapter

Division

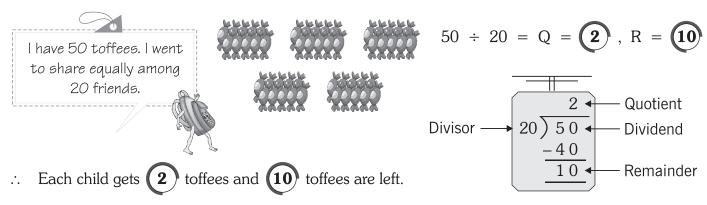
Roll Back

A. Put these 20 crayons into 4 boxes such that there are an equal number of crayons in each box.



Division is equal grouping or equal distribution of a given quantity.

2.



C. Divide using the long division method.

 $35 \div 7$

1.

$$\mathbf{Q} = 5$$
$$\mathbf{R} = 0$$

 $55 \div 6$

3.

$$Q = 8$$

$$\mathbf{R} = 2$$

$$\begin{array}{c}
1 & 2 & 7 \\
7 & 8 & 9 & 3 \\
-7 & & & \\
\hline
1 & 9 & & \\
-1 & 4 & & \\
\hline
5 & 3 & & \\
-4 & 9 & & \\
\hline
4
\end{array}$$

223 ÷ 2

$$\mathbf{Q} = 127$$
$$\mathbf{R} = 4$$

6. **678** ÷ **6**

$$\mathbf{R} = 0$$

$$\mathbf{Q} = 111$$

$$\mathbf{R} = 1$$

Let's Do

1.
$$14 \div 1 = \underline{14}$$

2.
$$16 \div \underline{1} = 16$$

3.
$$25 \div 1 = 25$$

4.
$$48 \div 48 = \underline{1}$$

5.
$$12 \div \underline{12} = 1$$

6.
$$9 \div 9 = 1$$

7.
$$0 \div 5 = 0$$

8.
$$0 \div 16 = 0$$

B. Tick (\checkmark) the correct option.

1.
$$36 \div 0 =$$

Tricky Maths

Fill in the ().

2.
$$7) \ 9 \ 2 \ 6$$

$$-\frac{7}{2} \ 2$$

$$-\frac{2}{1} \ 6$$

$$-\frac{1}{4} \ 2$$

HOTS QUESTION

Number of students worked on maths project = 6

Number of sets of abacus with each student = 6

Number of beads with each abacus = 60 + 12 extra

= 72total

Number of colours of beads = 6

:. Total number of beads with the students = $6 \times 6 \times 72 = 2592$

: There were an equal number of beads of each colour.

So, Number of each colour of beads = $2592 \div 6 = 432$

Hence, the number of the beads of each colour are there on each students table = $432 \div 6 = 72$

Exercise 5.1

A. Divide and check your answer.

$$Q = 15$$

$$\mathbf{R} = 3$$

$$Q = 15$$

$$\mathbf{R} = 3$$

Check:
$$Q \times Divisor + R = Dividend$$

 $15 \times 5 + 3 = 78$

75 + 3 = 78

78 = 78

Check:
$$Q \times Divisor + R = Dividend$$

$$15 \times 4 + 3 = 63$$

$$60 + 3 = 63$$

$$63 = 63$$

$$Q = 50$$

$$\mathbf{R} = 7$$

4.
$$649 \div 3$$

 $Q = 216$

$$\mathbf{R} = 1$$

Check:
$$Q \times Divisor + R = Dividend$$

$$216 \times 3 + 1 = 649$$

$$648 + 1 = 649$$

$$649 = 649$$

$$50 \times 9 + 7 = 457$$

$$450 + 7 = 457$$

 $457 = 457$

$$\mathbf{Q} = 33$$

$$\mathbf{R} = 4$$

$$\mathbf{Q} = 108$$

$$\mathbf{R} = 6$$

Check:
$$Q \times Divisor + R = Dividend$$

$$33 \times 7 + 4 = 235$$

$$231 + 4 = 235$$

$$235 = 235$$

$$\mathbf{Q} = 91$$

$$\mathbf{R} = 1$$

$$Q \times Divisor + R = Dividend$$

$$108 \times 9 + 6 = 978$$

$$972 + 6 = 978$$

$$978 = 978$$

$$Q = 29$$

$$\mathbf{R} = 6$$

Check:
$$Q \times Divisor + R = Dividend$$

$$91 \times 8 + 1 = 729$$

$$728 + 1 = 729$$

$$729 = 729$$

$$\mathbf{Q} = 129$$

$$\mathbf{R} = 0$$

Check:

$$Q \times Divisor + R = Dividend$$

$$29 \times 9 + 6 = 267$$

$$261 + 6 = 267$$

$$267 = 267$$

$$\mathbf{Q} = 1076$$

$$\mathbf{R} = 1$$

Check: $Q \times Divisor + R = Dividend$

$$129 \times 7 + 0 = 903$$

$$903 = 903$$

Check:

$$Q \times Divisor + R = Dividend$$

$$1076 \times 2 + 1 = 2153$$

$$2152 + 1 = 2153$$

$$2153 = 2153$$

$$\mathbf{Q} = 1265$$

$$\mathbf{R} = 5$$

$$\mathbf{Q} = 1054$$

$$\mathbf{R} = 5$$

Check:
$$Q \times Divisor + R = Dividend$$

$$1265 \times 6 + 5 = 7595$$

$$7590 + 5 = 7595$$

$$7595 = 7595$$

$$Q = 912$$

$$\mathbf{R} = 0$$

Check: $Q \times Divisor + R = Dividend$

$$912 \times 4 + 0 = 3648$$

$$3648 = 3648$$

$$\mathbf{Q} = 402$$

$$\mathbf{R} = 4$$

6)2416

Check:
$$Q \times Divisor + R = Dividend$$

$$1054 \times 8 + 5 = 8437$$

$$8432 + 5 = 8437$$

$$8437 = 8437$$

$$Q = 353$$

$$\mathbf{R} = 0$$

Check:
$$Q \times Divisor + R = Dividend$$

$$353 \times 3 + 0 = 1059$$

$$1059 = 1059$$

$$Q = 1346$$

$$\mathbf{R} = 2$$

$$\begin{array}{c}
1 & 3 & 4 & 6 \\
3 & 4 & 0 & 4 & 0 \\
-3 & & & \\
\hline
1 & 0 & & \\
-9 & & & \\
\hline
1 & 4 & & \\
-1 & 2 & & \\
\hline
2 & 0 & & \\
-1 & 8 & & \\
\end{array}$$

Check:
$$Q \times Divisor + R = Dividend$$

$$402 \times 6 + 4 = 2416$$

$$2412 + 4 = 2416$$

$$2416 = 2416$$

Check: $Q \times Divisor + R = Dividend$

$$1346 \times 3 + 2 = 4040$$

$$4038 + 2 = 4040$$

$$4040 = 4040$$

2

B. Find quotient and the remainder:

 $\begin{aligned} & \text{Quotient} = 211 \\ & \text{Remainder} = 0 \end{aligned}$

 $\begin{aligned} & \text{Quotient} = 113 \\ & \text{Remainder} = 0 \end{aligned}$

Quotient = 123Remainder = 0

 $\begin{aligned} & \text{Quotient} = 323 \\ & \text{Remainder} = 0 \end{aligned}$

$$\begin{array}{c|cccc}
 & 1 & 1 & 5 \\
 & 8 & 9 & 2 & 4 \\
 & -8 & & & \\
\hline
 & 1 & 2 & & \\
 & -8 & & & \\
\hline
 & 4 & 4 & & \\
 & -4 & 0 & & \\
\hline
 & 4 & & & \\
\end{array}$$

Quotient = 115 Remainder = 4 Quotient = 124Remainder = 6 Quotient = 3181Remainder = 0 Quotient = 2284Remainder = 0

$$\begin{array}{r}
1 & 8 & 8 & 7 \\
4 & 7 & 5 & 5 & 0 \\
-4 & & & & \\
\hline
3 & 5 & & & \\
-3 & 2 & & & \\
\hline
3 & 5 & & & \\
-3 & 2 & & & \\
\hline
3 & 0 & & & \\
-2 & 8 & & & \\
\hline
2 & & & & \\
\end{array}$$

Quotient = 1436Remainder = 0

Quotient =
$$1887$$

Remainder = 2

Quotient =
$$731$$

Remainder = 3

Quotient =
$$757$$

Remainder = 5

13. **7424 ÷ 4**

14. **6005** ÷ **5**

9432 ÷ 7 15.

 $5383 \div 6$ 16.

Quotient = 1856

Remainder = 0

Quotient = 1201

Remainder = 0

Quotient = 1347

Remainder = 3

Quotient = 897

Remainder = 1

Tricky Maths

= 10 Number of marbles holded in one jar

And, total number of marbles = 700

.. Number of jars $= 700 \div 10 = 70$

Number of full jar of marbles sold = 45

Remaining number of jars of marbles = 70 - 45 = 25

Hence, 25 jars full of marbles are still left with the shopkeeper.

L∈t's Do≡

Find the quotient and remainder.

Q 4

R 2

8

Q R 4

9

R

64

92

3. $99 \div 10$ Q R 9

 $288 \div 10$ 4.

 $42 \div 10$

28

Q

5

5.

2. $14 \div 10$

 $249 \div 10$

1 24

6.

 $7411 \div 10$

1

Let's Do≣

1.

1.

Find the quotient and remainder without doing long division.

R

6

2. $864 \div 100$ Q 8

3.

Q 41

9

741

R 9

99

4. $3075 \div 100 =$ 30

513 ÷ 100

13 75

5. $9092 \div 100$ 90

6.

 $9999 \div 100$

 $4109 \div 100$

99

HOTS QUESTION

Radesh has collected money = ₹2560

He has 10-rupee notes =

.. Cost of 10-rupee notes

= 6×₹10=₹60

And, remaining money

= ₹2560-₹60 = ₹2500

- : He has only 10-rupee and 100-rupee notes.
- : Number of 100-rupee notes = $2500 \div 100 = 25$

Hence, Radesh has 25 notes of 100 rupee.

Let's Do

Find the quotient and remainder without doing long division.

1

6

Q

Exercise 5.2

Fill in the blanks.

1.
$$3200 \div 10 = 320$$

2.
$$612000 \div 1000 = 612$$

8 9

3.
$$69000 \div 100 = 690$$

4.
$$15000 \div 1000 = 15$$

5.
$$2000 \div 100 = 20$$

6.
$$20000 \div 1000 = 20$$

7.
$$780 \div 10 = 78$$

8.
$$72000 \div 1000 = 72$$

В. Divide the following numbers by 10 and write the quotient and remainder.

- 398 divided by 10
- 2. 894 divided by 10
- 3. 1011 divided by 10

Quotient = 39

Remainder
$$= 8$$

Quotient = 89Remainder = 4 Quotient = 101

3922 divided by 10 4.

- 462 divided by 10 5.
- Remainder = 16. 961 divided by 10

$$\begin{array}{r}
3 9 2 \\
10 \overline{\smash)39222} \\
-3 0 \\
\hline
9 2 \\
-9 0 \\
\hline
2 2 \\
-2 0 \\
\hline
2
\end{array}$$

Quotient = 392

Remainder = 2

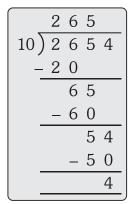
Quotient
$$= 46$$

Remainder
$$= 2$$

Quotient
$$= 96$$

Remainder
$$= 1$$

7. 2654 divided by 10



Quotient = 265

Remainder = 4

8. 12345 divided by 10

- Quotient = 1234Remainder = 5
- C. Divide the following numbers by 100.
 - 1. 925 divided by 100
 - 9 100) 9 2 5 - 9 0 0 2 5
- 2. 3498 divided by 100
 - 3 4 100) 3 4 9 8 - 3 0 0 4 9 8 - 4 0 0 9 8

Quotient = 9

Remainder = 25

4. 4810 divided by 100

Quotient = 48

Remainder = 10

Quotient = 34

Remainder = 98

5. 13629 divided by 100

Quotient = 136

Remainder = 29

3. 52630 divided by 100

	5	2	6			
100)	5	2	6	3	0	•
_	5	0	0			
_		2	6	3		
_	_	2	0	0		
_			6	3	0	•
_		_	6	0	0	
	·	·		3	0	

Quotient = 526

Remainder = 30

6. 71808 divided by 100

Quotient = 718

Remainder = 8

7. 5629 divided by 100

_	5	6		
100	5 (6	2	9
_	- 5	0	0	
		6	2	9
	_	6	0	0
'-			2	9

8. 25607 divided by 100

$$\begin{array}{r}
2 5 6 \\
100 \overline{\smash)25607} \\
-2 0 0 \\
\hline
5 6 0 \\
-5 0 0 \\
\hline
6 0 7 \\
-6 0 0 \\
\hline
7
\end{array}$$

9. 239411 divided by 100

$$\begin{array}{c}
2 & 3 & 9 & 4 \\
100 \overline{\smash)} & 2 & 3 & 9 & 4 & 1 & 1 \\
-2 & 0 & 0 \\
\hline
& 3 & 9 & 4 \\
-3 & 0 & 0 \\
\hline
& 9 & 4 & 1 \\
-9 & 0 & 0 \\
\hline
& 4 & 1 & 1 \\
-4 & 0 & 0 \\
\hline
& 1 & 1
\end{array}$$

Quotient = 56Remainder = 29

10. 7201 divided by 100

Quotient = 256

Remainder = 7

11. 48029

Quotient = 2394

Remainder = 11

12. 623222 divided by 100

Quotient = 72Remainder = 1

13. 863451 divided by 100

Quotient = 480;

Remainder = 29

14. 904028 divided by 100

Quotient = 6232;

Remainder = 22

15. 725900 divided by 100

Quotient = 8634;

Remainder = 51

Quotient = 9040; Remainder = 28

Quotient = 7259; Remainder = 0

Divide the following numbers by 1000.

3856 divided by 1000

	3			
1000)	3	8	5	6
_	3	0	0	0
		8	5	6

2. 51058 divided by 1000

	5	1			
1000)	5	1	0	5	8
_	5	0	0	0	
_		1	0	5	8
_	_	1	0	0	0
_				5	8
_					

5209 divided by 1000 3.

Quotient = 3

Remainder = 856

4. 72002 divided by 1000

Quotient = 51

Remainder = 58

5. 6800 divided by 1000

Quotient = 5

Remainder = 209

21347 divided by 1000 6.

Quotient = 72

Remainder = 2

7. 460723 divided by 1000

$$\begin{array}{r}
4 & 6 & 0 \\
1000 \overline{\smash)} & 4 & 6 & 0 & 7 & 2 & 3 \\
-4 & 0 & 0 & 0 \\
\hline
 & 6 & 0 & 7 & 2 \\
-6 & 0 & 0 & 0 \\
\hline
 & 7 & 2 & 3
\end{array}$$

Quotient = 6

8.

Remainder = 800

62820 divided by 1000

Quotient = 21

Remainder = 347

9. 572009 divided by 1000

$$\begin{array}{r}
5 & 7 & 2 \\
1000) 5 & 7 & 2 & 0 & 0 & 9 \\
-5 & 0 & 0 & 0 \\
\hline
7 & 2 & 0 & 0 \\
-7 & 0 & 0 & 0 \\
\hline
2 & 0 & 0 & 9 \\
-2 & 0 & 0 & 0 \\
\hline
9
\end{array}$$

Quotient = 460

Remainder = 723

Quotient = 62

Remainder = 820

Quotient = 572

Remainder = 9

10. 590632 divided by 1000

Quotient = 590Remainder = 632

Let's Do≣

Fill in the blanks to make the sentences true.

- 1. $936 \div 9$ gives quotient 104 and remainder 0.
- 2. **350**÷23 gives quotient 15 and remainder 5.
- 3. $1022 \div 14$ gives quotient **73** and remainder 0.
- 4. $1932 \div 31$ gives quotient **62** and remainder **10**.

Exercise 5.3

A. Divide the following and write the quotient and remainder.

1.
$$141 \div 18$$

Quotient = 7Remainder = 15

$$5. \quad 433 \div 44$$

Quotient = 9Remainder = 37

9.
$$256 \div 34$$

Quotient = 7Remainder = 18

$$2. \quad 257 \div 35$$

Quotient = 7Remainder = 12

6.
$$460 \div 56$$

Quotient = 8Remainder = 12

10.
$$115 \div 18$$

Quotient = 6Remainder = 7

$$3. \quad 104 \div 21$$

Quotient = 4Remainder = 20

7.
$$304 \div 62$$

$$\begin{array}{r}
 4 \\
 62 \overline{\smash{\big)}\ 3\ 0\ 4} \\
 -2\ 4\ 8 \\
 \hline
 5\ 6
\end{array}$$

Quotient = 4Remainder = 56

11.
$$513 \div 45$$

Quotient = 11Remainder = 18

4.
$$345 \div 42$$

Quotient = 8Remainder = 9

8.
$$735 \div 81$$

Quotient = 9Remainder = 6

Quotient = 7Remainder = 15

13.
$$231 \div 57$$

14.
$$952 \div 82$$

Quotient
$$= 4$$

Remainder $= 3$

Quotient
$$= 11$$

Remainder $= 50$

15.
$$607 \div 38$$

16.
$$904 \div 77$$

$$Quotient = 11$$

Remainder
$$= 57$$

B. Divide and check the answer.

$$Q \times D + R = Dividend$$

 $5 \times 16 + 13 = 93$
 $93 = 93$

$$Q \times D + R = Dividend$$

 $2 \times 25 + 22 = 72$
 $72 = 72$

5. **567** ÷ **21**

$$Q \times D + R = Dividend$$

 $27 \times 21 + 0 = 567$
 $567 = 567$

2. **82 ÷ 17**

:
$$Q \times D + R = Dividend$$

 $4 \times 17 + 14 = 82$
 $82 = 82$

$$\begin{array}{c|c}
1 \\
41) 6 3 \\
-4 1 \\
\hline
2 2
\end{array}$$

:
$$Q \times D + R = Dividend$$

 $1 \times 41 + 22 = 63$
 $63 = 63$

6. **278** ÷ **14**

:
$$Q \times D + R = Dividend$$

 $19 \times 14 + 12 = 278$
 $278 = 278$

$$\textbf{Check} \ : \qquad Q \times D + R = Dividend$$

$$32 \times 18 + 3 = 579$$

$$579 = 579$$

Check:
$$Q \times D + R = Dividend$$

$$7 \times 25 + 0 = 175$$

$$175 = 175$$

Check:
$$Q \times D + R = Dividend$$

$$23 \times 22 + 19 = 525$$

$$525 = 525$$

C. Divide and check your answer.

Check:
$$Q \times D + R = Dividend$$

$$51 \times 8 + 18 = 426$$

$$426 = 426$$

Check:
$$Q \times D + R = Dividend$$

$$45 \times 16 + 15 = 735$$

$$735 = 735$$

Check: $Q \times D + R = Dividend$

$$30 \times 23 + 5 = 695$$

$$695 = 695$$

2. **9084 ÷ 62**

Check: $Q \times D + R = Dividend$

$$130 \times 27 + 23 = 3533$$

$$3510 + 23 = 3533$$

3. **6394 ÷ 41**

Check: $Q \times D + R = Dividend$

$$155 \times 41 + 39 = 6394$$

$$6355 + 39 = 6394$$

5. **5204 ÷ 93**

Check: $Q \times D + R = Dividend$

$$55 \times 93 + 89 = 5204$$

$$5115 + 89 = 5204$$

$$5204 = 5204$$

7. **6400** ÷ **48**

Check: $Q \times D + R = Dividend$

$$146 \times 62 + 32 = 9084$$

$$9052 + 32 = 9084$$

4. **8841 ÷ 52**

$$\begin{array}{r}
1 & 7 & 0 \\
52) 8 & 8 & 4 & 1 \\
-5 & 2 \\
\hline
3 & 6 & 4 \\
-3 & 6 & 4 \\
\hline
0 & 1
\end{array}$$

Check: $Q \times D + R = Dividend$

$$170 \times 52 + 1 = 8841$$

$$8840 + 1 = 8841$$

6. **3374 ÷ 29**

Check: $Q \times D + R = Dividend$

$$116 \times 29 + 10 = 3374$$

$$3364 + 10 = 3374$$

$$3374 = 3374$$

8. **2089** ÷ **53**

 $\textbf{Check} : \qquad Q \times D + R = Dividend$

 $133 \times 48 + 16 = 6400$

6384 + 16 = 6400

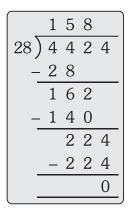
9. **3708** ÷ **18**

Check: $Q \times D + R = Dividend$

 $206 \times 18 + 0 = 3708$

3708 + 0 = 3708

11. **4424** ÷ **28**



 $\textbf{Check} \ : \qquad Q \times D + R = Dividend$

 $158 \times 28 + 0 = 4424$

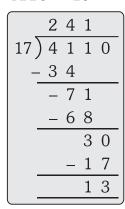
4424 + 0 = 4424

Check: $Q \times D + R = Dividend$

 $53 \times 39 + 22 = 2089$

2067 + 22 = 2089

10. **4110 ÷ 17**

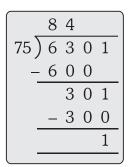


Check: $Q \times D + R = Dividend$

 $241 \times 17 + 13 = 4110$

4097 + 13 = 4110

12. **6301 ÷ 75**



Check: $Q \times D + R = Dividend$

 $84 \times 75 + 1 = 6301$

6300 + 1 = 6301

Exercise 5.4

A. Match the columns as shown.

ROUNDS TO DIVISION QUESTION ESTIMATED QUOTIENT 1. $315 \div 43$ $90 \div 30$ $19 \div 2 -$ 2 9 $868 \div 37$ $90 \div 40$ 2. $30 \div 4$ 3. $86 \div 27 190 \div 20$ $90 \div 4$ $91 \div 36$ $300 \div 40$ $9 \div 3 -$ 4. 7 $900 \div 40$ $193 \div 24$ - 22

B. Fill in the table and estimate the quotient.

B. Fill in the table and estimate the quotient.

	QUESTION	ROUNDS TO	DIVISION	ESTIMATED QUOTIENT
1.	78 ÷ 18	80 ÷ 20	8 ÷ 2	4
2.	64 ÷ 21	60 ÷ 20	6 ÷ 2	3
3.	289 ÷ 69	300 ÷ 70	30 ÷ 7	4
4.	753 ÷ 29	800 ÷ 30	80 ÷ 3	26
5.	691 ÷ 51	700 ÷ 50	70 ÷ 5	14

HOTS QUESTION

A shopkeeper bought crayons 9 packets

50 And, number of crayons in each packet

 $9 \times 50 = 450$.. Total number of crayons with him

: He repacked them into boxes containing 6 crayons each.

So, total number of boxes $450 \div 6 = 75$

Hence, the shopkeeper got 75 boxes of crayons.

Exercise 5.5

A. Solve these story sums.

- Number of balls in 7 boxes
 - $168 \div 7$.. Number of balls in each box 24

Hence, there are 24 balls packed in each box.

- 2. Number of trees planted in 9 rows
 - .. Number of trees planted in 1 row

Hence, there are 17 trees planted in each row.

Cost of 25 tickets of movie 3.

.: Cost of 1 ticket of movie

₹2125 ₹2125 ÷ 25

168

153

17

₹85

Hence, the cost of 1 ticket of movie is ₹85.

$$∴ Cost of 1 wrist watch = ₹2875 ÷ 23$$
$$= ₹125.$$

Hence, the cost of 1 wrist watch is ₹125.

		1	2	5		
23))	2	8	7	5	
_	_	2	3			
			5	7		
		_	4	6		
			1	1	5	
		_	1	1	5	
						7
					0	

Length of each piece of rope

 \therefore Number of pieces can be cut into the rope = $3825 \div 35$

$$= Q = 109, R = 10$$

= 3825 cm

 $= 35 \, \mathrm{cm}$

Hence, 109 pieces can be cut from the rope and 10 cm of rope will be left over.

$$\begin{array}{r}
1 & 0 & 9 \\
35) 3 & 8 & 2 & 5 \\
-3 & 5 \\
\hline
& 3 & 2 & 5 \\
\hline
& -3 & 1 & 5 \\
\hline
& 1 & 0
\end{array}$$

Number of children

₹6385 ÷ 51 .. Money shared to each child

$$Q = 125,$$

 $R = 10$

₹6385

51

₹2875

Hence, each child will get ₹125 and ₹10 will be left over.

7050 Number of bulbs produces in 30 days $7050 \div 30$ Number of bulbs produced in 1 day

235

Hence, the factory produced 235 bulbs in a day.

Exercise 5.6

=

Hence, the cost of 9 litre of kerosene is ₹486.

- 9 0

1 5 0

-150

$$\therefore$$
 Number of mangoes in 1 box = 208 \div 8

So, Number of mangoes in 15 boxes $= 26 \times 15 = 390$ Hence, there will be 390 mangoes in 15 such boxes.

∴ Cost of 1 sweater =
$$₹2950 \div 5 = ₹590$$

So, the Cost of 9 sweaters
$$=$$
 ₹ 590 × 9 $=$ ₹ 5310

Number of baskets made in 1 day
$$= 57 \div 3 = 19$$

Number of baskets made in 7 days =
$$19 \times 7 = 133$$

$$\therefore$$
 Number of baskets made in 1 week = 133

So, the number of baskets made in 2 weeks
$$= 133 \times 2$$

57

2 6

9 0

× 1 5

5 9 0

5)2950 -25

4 5

4 5

0

<u> 0</u>

3

6. Cost of 1 dozen pers or 12 pens =
$$300$$

Cost of 1 pen
$$= 300 \div 12 = 25$$

$$∴ Cost of 14 pens = ₹25 × 14$$

So, the Cost of 14 pens is ₹350.

7. Rent of a house for 1 year or 12 months
$$=$$
 ₹48120

∴ Rent of the house for 7 months =
$$₹4010 \times 7$$

Hence, the rent of the house for 7 months will be paid ₹28070.

Cost of 1 register
$$=$$
 ₹360 ÷ 20 $=$ ₹18

Hence, the cost of 23 registers is ₹414.

₹240

0

× 3

10. Number of school dresses stitched in 7 days

$$(: 7 \text{ days} = 1 \text{ week})$$

Hence, 63 school dresses will be stitch in 3 weeks.

So, the cost of 5 Sarees =
$$(203 \times 5)$$

$$\begin{array}{r}
 2 0 3 \\
 15) 3 0 4 5 \\
 -3 0 \\
 \hline
 0 4 5 \\
 -0 4 5
\end{array}$$

21

21

0

 $21 \times 3 = 63$

4875

6 3

₹14625

Now, the cost of 2 mixers
$$=$$
 74875×2

Hence, Sudha will get ₹9750 more, if she sells 2 more mixers.

$$\therefore$$
 Kerosene distributed to 1 card holder = $369 \div 4 = 9 L$

So, the Kerosene distributed to 6 cardholders
$$= 9 \times 6 = 54 \text{ L}$$

Hence, 6 cardholders will get 54 litres of kerosene.

∴ Selling price of 4 kg of mangoes =
$$₹16 \times 4 = ₹64$$

Hence, the fruit vendor sold 4 kg of mangoes for ₹64.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

2 8 8

- 2 8 8

NEP SDGs for Qualitative Education

• Keeping the relation between quotient, divisor, remainder and dividend in mind, find the missing numbers and write them in the given table at the appropriate places:

Quotient	Divisor	Remainder	Dividend
26	18	4	472
342	23	2	7868
568	8	0	4544
1720	5	4	8604
50	43	33	2183

Worksheet

2. A maths test paper has 10 questions and the total marks are 100. If Minakshi answers 8 questions correctly, how many marks will she get?

Total marks for 10 questions = 100

Marks for 1 question = $100 \div 10 = 10$

Marks for **8** question = $8 \times 10 = 80$

Hence, Minakshi will get 80 marks.

3. Rupak painted 28 m of a wall in 7 days. How much did he paint in the first 4 days?

Wall painted in 7 days = 28 m

Wall painted in $1 \text{ day} = 28 \div 7 = 4 \text{ m}$

Wall painted in $\mathbf{4}$ days = $\mathbf{4} \times \mathbf{4} = \mathbf{16}$ m

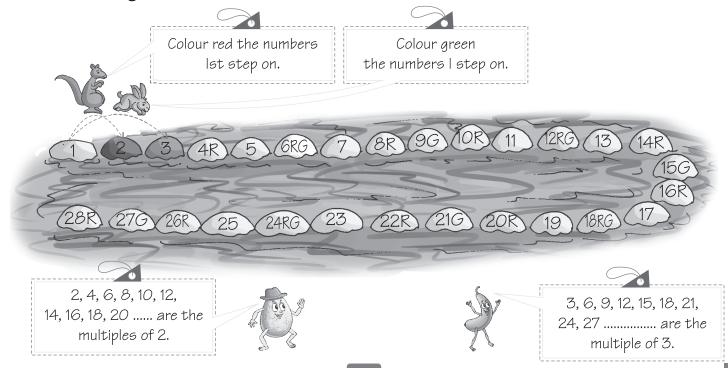
Hence, Rupak painted **16** min of wall in **4** days.

Chapter 6

Multiples and Factors

Roll Back

A. Mr Kangoo jumps 2 steps at 1 time starting from 1 and Mr Robby jumps 3 steps at a time starting from 1.



	- D								
Let	s Do								
1.	Tick(✓) the multiples of 2.								
	$3 (\mathbf{X}) 4 (\mathbf{V}) 7 (\mathbf{X}) 6 (\mathbf{X}) 6 $	1	10		12		13	X	
2.	Tick(✓) the multiples of 7.								
		/	26	(x)	28		35		
			20		20				
Tr	cky Maths								
Wr	ite Tfortrue or Fforfalse in () .								
1.	27 is a multiple of 4. (F) 2.	35 i	smultipl	leof5	(\widehat{T}			
1.	2. Summingle of 1.	5510	311111111131	1015.	\				
L∈t	s Do								
1.	Find first 2 common multiples of 7 and 8.	2.	Find fin	rst $2\mathrm{com}$	mon m	ultiples	of 3 and	l 5.	
	The multiples of 7.		The mu	ıltiples of	£ 3.				_
	7 14 21 28 35 42 49 (56)		3 6	9 12	(15)) 18 '	21 24	27 (3	30)
	63 70 77 84 91 98 105 (112)								
	The multiples of 8.			ıltiples ol		(70)	75 40	45 5	
	8 16 24 32 40 48 (56) 64		5 10	(15) 20	0 25	(30)	<i>5</i> 5 40	45 5	50
	72 80 88 96 104 (112)		0		1. 1	(7	15 1	5 70	
	\therefore Common multiples of 7 and 8 \Rightarrow 56,112		∴ Con	ımon mu	ltiples	of Sano	$C \Leftrightarrow C$.5, 30	
	(T	. 6							
	Exercis	e 0.1							
A.	Write the first five multiples of the following	3.							
	1. Multiples of 10 are 10, 20, 30, 40 and 50.	2.	Multi	iples of	8 are	8, 16,	24, 32,	and 40	
	3. Multiples of 6 are 6, 12, 18, 24 and 30.	4.	Multi	iples of	7 are	7, 14,	21, 28	and 35.	
	5. Multiples of 12 are 12, 24, 36, 48 and 60.	6.	Multi	iples of	20 are	e 20, 4	0, 60, 8	30 and 1	100.
	7. Multiples of 13 are 13, 26, 39, 52 and 65.	8.	Multi	iples of	11 are	e 11, 2	2, 33, 4	14 and 5	55.
В.	Find the multiples of.								
	1. Multiples of 9 are	2.		iples of					
	9, 18, 27, 36, 45, 54, 63,		,	,			,	84, 96.	
	Multiples of 9 in between 40 and 60 are			-	12 in	betwee	en 60 a	nd 90 a	re
<u></u>	45, 54.		72, 8	34.					
C.	Say whether the following are True or False. 1. False 2. False 3. True			4. Fals	50		5. Tr	10	
D.	Colour red the multiples of 4 and colour								mor
D.	multiples.	orue	s the	munip	165 0	1 U. L	ist tile	en con	111101
	1 2 3 R 5		B	7		R	9		10)
	(11) (RB) (13) (14) (15)		R	17		В	19		\overline{R}
								-	

(21) (22) (23) (RB) (25) (26) (27) (R) (29) (B)

Common multiples of 4 and 6 are 12, 24.

E. Find the first two common multiples of.

1. **2, 6**

Multiples of 2 are 2, 4, 6, 8, 10, 12, 14, 16, 18

Multiples of 6 are 6, 12, 18

:. First two common multiples of 2 and 6 are 6 and 12.

2. **3, 4**

Multiples of 3 are 3, 6, 9, 12, 15, 18, 21, 24

Multiples of 4 are 4, 8, 12, 16, 20, 24

:. First two common multiples of 3 and 4 are 12 and 24.

3. **10.5**

Multiples of 10 are 10, 20, 30, 40

Multiples of 5 are 5, 10, 15, 20, 25

:. First two common multiples of 10 and 5 are 10 and 20.

4. **5, 6**

Multiples of 5 are 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

Multiples of 6 are 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

:. First two common multiples of 5 and 6 are 30 and 60.

5. **6, 3**

Multiples of 6 are 6, 12, 18, 24

Multiples of 3, 6, 9, 12, 15

:. First two common multiples of 6 and 3 are 6 and 12.

6. **4, 7**

Multiples of 4 are 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56

Multiples of 7 are 7, 14, 21, 28, 35, 42, 49, 56, 63, 60

:. First two common multiples of 4 and 7 are 28 and 56.

7. **4,8**

 $\text{Multiples of 4 are} \quad 4, \quad 8, \quad 12, \quad 16, \quad 20, \quad 24, \quad 28, \quad 32, \quad 36$

Multiples of 8 are 8, 16, 24, 32

 \therefore First two common multiples of 4 and 8 are 8 and 16.

8. **3, 5**

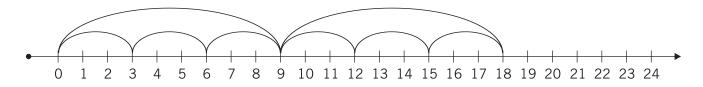
Multiples of 3 are 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Multiples of 5 are 5, 10, 15, 20, 25, 30

 \therefore First two common multiples of 3 and 5 are 15 and 30.

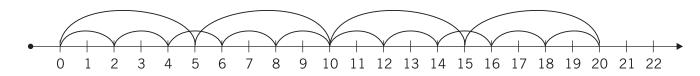
F. Using number line list first two common multiples.

1. **3, 9**



.. First two common multiples of 3 and 9 are 9 and 18.

2. **5, 2**



:. First two common multiples of 5 and 2 are 10 and 20.

Tricky Maths

Divide and find out which of the following numbers are factors of 72.

1

2,

3,

4,

5,

6,

7,

8,

9,

11,

12,

13,

14, 15.

Exercise 6.2

A. Find factors using multiplication.

1. Factors of 14

$$1\times14=14$$

$$2 \times 7 = 14$$

$$7 \times 2 = 14$$

$$14 \times 1 = 14$$

 \therefore The factors of 14 are 1, 2, 7 and 14.

3. **Factors of 16**

$$1\times16=16$$

$$2 \times 8 = 16$$

$$4 \times 4 = 16$$

$$8 \times 2 = 16$$

$$16 \times 1 = 16$$

.. The factors of 16 are 1, 2, 4, 8 and 16.

2. **Factors of 12**

10,

$$1 \times 12 = 12$$

$$2 \times 6 = 12$$

$$3 \times 4 = 12$$

$$4 \times 3 = 12$$

$$6 \times 2 = 12$$

$$12 \times 1 = 12$$

- \therefore The factors of 12 are 1, 2, 3, 4, 6 and 12.
- 4. Factors of 54

$$1\times54=54$$

$$2 \times 27 = 54$$

$$3\times18=54$$

$$6 \times 9 = 54$$

$$9 \times 6 = 54$$

$$18 \times 3 = 54$$

$$27 \times 2 = 54$$

$$54 \times 1 = 54$$

 \therefore The factors of 54 are 1, 2, 3, 6, 9, 18, 27 and 54.

5. **Factors of 25**

$$1 \times 25 = 25$$

$$5 \times 5 = 25$$

$$25 \times 1 = 25$$

 \therefore The factors of 25 are 1, 5 and 25.

B. Find factors using division.

1. Factors of 18

$$\begin{array}{|c|c|c|c|c|}
\hline
2 \\
9 & 1 & 8 \\
- & 1 & 8 \\
\hline
0 & \\
\end{array}$$

$$\begin{array}{r}
 1 \\
 18 \overline{\smash{\big)}\ 1\ 8} \\
 -1\ 8 \\
 \hline
 0
\end{array}$$

 \therefore The factors of 18 are 1, 2, 3, 6, 9 and 18.

2. **Factors of 25**

∴ The factors of 25 are 1, 5 and 25.3. Factors of 39

$$\begin{array}{c|c}
3 & 9 \\
1 & 3 & 9 \\
-3 & 9 \\
\hline
0
\end{array}$$

$$\begin{array}{c|c}
3 \\
13 & 3 & 9 \\
-3 & 9 \\
\hline
0 & 0
\end{array}$$

$$\begin{array}{c|c}
 & 1 \\
 39) 3 9 \\
 - 3 9 \\
\hline
 & 0
\end{array}$$

 \therefore The factors of 39 are 1, 3, 13 and 39.

4. **Factors of 42**

$$\begin{bmatrix}
4 & 2 \\
1 & 4 & 2 \\
- & 4 & 2 \\
\hline
0
\end{bmatrix}
\begin{bmatrix}
2 & 1 \\
2 & 4 & 2 \\
- & 4 & 2 \\
\hline
0
\end{bmatrix}$$

$$\begin{bmatrix}
 7 \\
 6 \\
 4 \\
 2 \\
 \hline
 0
\end{bmatrix}$$

$$\begin{bmatrix}
 6 \\
 7 & 4 & 2 \\
 - & 4 & 2 \\
 \hline
 0
 \end{bmatrix}
 \begin{bmatrix}
 1 \\
 1
 \end{bmatrix}$$

$$\begin{array}{c|c}
3 \\
14) 4 2 \\
- 4 2 \\
\hline
0
\end{array}$$

∴ The factors of 42 are 1, 2, 3, 6, 7, 14, 21 and 42.

5. **Factors of 56**

$$\begin{bmatrix}
 5 & 6 \\
 1) & 5 & 6 \\
 -5 & 6 \\
 \hline
 0
 \end{bmatrix}$$

$$\begin{array}{c}
2 & 8 \\
2 & 5 & 6 \\
- & 5 & 6 \\
\hline
& 0
\end{array}$$

$$\begin{bmatrix}
 1 & 4 \\
 4 & 5 & 6 \\
 - 5 & 6 \\
 \hline
 0
 \end{bmatrix}$$

$$\begin{bmatrix}
 8 \\
 7) 5 6 \\
 - 5 6 \\
 \hline
 0
 \end{bmatrix}$$

$$\begin{array}{c|c}
 & 4 \\
 14) 5 6 \\
 - 5 6 \\
\hline
 & 0
\end{array}$$

$$\begin{array}{c}
2 \\
28 \overline{\smash{\big)}\ 56} \\
-56 \\
\underline{}
\end{array}$$

... The factors of 56 are 1, 2, 4, 7, 8, 14, 28 and 56.

C. Answer the following:

- 1. No, 8 is not a factor of 35.
- 3. Yes, 6 is a factor of 42.

- 2. Yes, 8 is a factor of 48.
- 4. Yes, 7 is a factors of 56.

D. Say whether the following are True or False.

8 is a factor of 24.

- True
- 2. 6 is a factor of 15.

of factors.

False

3. 0 is a factor of 9.

- False
- 1 is a factor of every number.
- True

- 5. Every number is a factor of itself.
- True
- Every number has countless number
- False

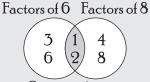
Let's Do≡

Find the factors of 6 and 8 and write common factors in the shaded part.

Factors of 6 are 1, 2, 3, 6.

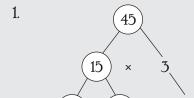
Common factors: 1, 2.

Factors of 8 are 1, 2, 4, 8.

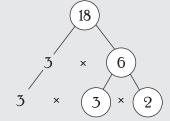


Common factors

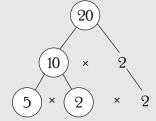
Let's Do≡



2.



3.



Exercise 6.3

Write all the factors of the numbers in each pair. Then find the common factors.

- 20 **1**, **2**, 4, 5, 10, 20 1. \rightarrow
 - 18 **1**, **2**, 3, 6, 9, 18 \rightarrow
 - ∴ Common factors–1, 2
- **1**, 3, **7**, 21 3. 21
 - 14 **1**, 2, **7**, 14 \rightarrow
 - ∴ Common factors–1, 7.
- 5. **1, 2,** 3, 6 6 \rightarrow
 - 16 **1**, **2**, 4, 8, 16 \rightarrow
 - \therefore Common factors–1, 2.
- 7. 22 **1, 2,** 11, 22 \rightarrow
 - 4 \rightarrow **1**, **2**, 4

Common factors—1, 2.

- 2. 27
- **1**, **3**, 9, 27
- 24

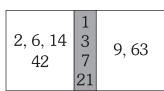
 \rightarrow

- **1**, 2, **3**, 4, 6, 8, 12, 24
- ∴ Common factors–1, 3
- 4. 30 **1**, 2, **3**, **5**, 6, 10, **15**, 30
 - 45 **1**, **3**, **5**, 9, **15**, 45 \rightarrow
 - \therefore Common factors-1, 3, 5, 15.
- 6. **1**, 2, **5**, 10 10
 - 25 **1**, **5**, 25 \rightarrow
 - ∴ Common factors–1, 5.
- 8. 13 **1**. 13 \rightarrow
 - 17 \rightarrow 1, 17
 - Common factor—1.

Write all the factors of these numbers. Write the common factors in the part shaded В. orange.

- 1. 9 **1**. **3**. 9
 - 12 \rightarrow **1**, 2, **3**, 4, 6, 12
 - ∴ Common factors–1, 3.
- 2. 21 **1**, 3, **7**, 21
 - 56 **1**, 2, 4, **7**, 8, 14, 28, 56 \rightarrow
 - ∴ Common factors–1, 7.
- **1**, 2, **3**, 6, **7**, 14, **21**, 42 3. 42
 - 63 **1**, **3**, **7**, 9, **21**, 63
 - \therefore Common factors–1, 3, 7, 21.

1 2, 4, 6, 9 3 12



2, 4, 8, 3, 21 14, 28, 56

C. Make a factor tree for each of these numbers.

1. 21

2. 14

3. 28

4. 27

- 21
- (14) (2) × (7)

40

- $\begin{array}{c}
 (28) \\
 2) \times (14) \\
 \hline
 (2) \times (7)
 \end{array}$
- 3 × 9 3 × 3

- 5. 56
 - 56 2 × (28)

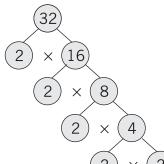
2

 \times

 $\begin{array}{c}
 40 \\
 2 \times 20 \\
 \hline
 2 \times 20 \\
 \hline
 7)$

6.

- 7. 35
- 35 5 × 7
- 8. 32



Exercise 6.4

A. Colour the even numbers red and odd numbers green.







12 12

× (5

(10)

- 64 64
- 32 32
- 71
- 19

17



- 34
- 29
- 10 R







- 64 64
- 79
- 99
- 94 94
- 83
- 100
- 25
- R 44

- **B.** 1. The prime numbers between 1 and 60 = 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59.
 - 2. All the pairs of twin primes between 1 and 60 are (3 and 5); (5 and 7); (11 and 13); (17 and 19); (29 and 31); (41 and 43).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

C. Check whether the number is prime or composite by listing its factors.

Prime numbers : Prime numbers are the numbers having only factors i.e., 1 and the number itself.

Composite numbers: Composite numbers are the numbers having 3 or more factors.

- 5 1. Factors of 5 are 1 and 5 \Rightarrow
- 2. 12 Factors of 12 are 1, 2, 3, 4 and 12. \Rightarrow
- 3. 15 Factors of 15 are 1, 3, 5, and 15. \Rightarrow
- 4. 27 Factors of 27 are 1, 3, 9, and 27. \Rightarrow
- 5. Factors of 31 are 1 and 31. 31 \Rightarrow
- 6. 39 Factors of 39 are 1, 3, 13 and 39. \Rightarrow
- 7. 52
- Factors of 52 are 1, 2, 4, 13, 26 and 52. \Rightarrow
- 8. Factors of 60 are 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, and 60. 60 \Rightarrow So, 60 is a composite number.
- 9. 67 Factors of 67 are 1 and 67. \Rightarrow
- 10. 89 Factors of 89 are 1 and 89. \Rightarrow
- Factors of 95 are 1, 5, 19 and 95. 11. 95 \Rightarrow
- Factors of 99 are 1, 3, 9, 11, 33 and 99. 12. 99 \Rightarrow

So, 52 is a composite number.

So, 31 is a prime number

So, 5 is a prime number.

So, 12 is a composite number

So, 15 is a composite number.

So, 27 is a composite number.

So, 39 is a composite number.

- So, 67 is a prime number.
- So, 89 is a prime number
- So, 95 is a composite number
- So, 99 is a composite number.

D. List the prime numbers between 75 and 100.

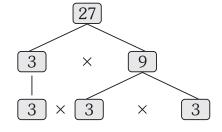
Numbers in between 75 and 100

- 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
- ... Prime numbers in between 75 and 100
- 79, 83, 89 and 97.

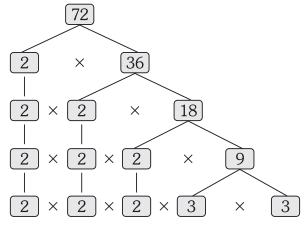
Exercise 6.5

Find prime factors of given numbers.

 1×27 1. **27**

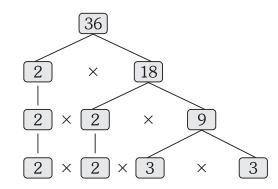


So, 27 $3 \times 3 \times 3$. 2. **72** 1×72 \Rightarrow



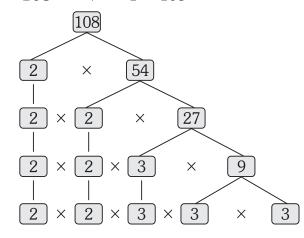
 $2 \times 2 \times 2 \times 3 \times 3$. So, 72

3. **36** \Rightarrow 1×36



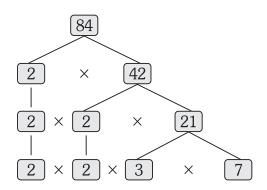
So,
$$36 = 2 \times 2 \times 3 \times 3$$
.

5. **108** \Rightarrow 1×108



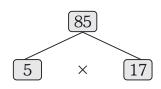
So,
$$108 = 2 \times 2 \times 3 \times 3 \times 3$$
.

7. **84** \Rightarrow 1×84



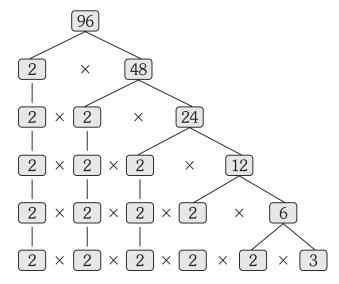
So,
$$84 = 2 \times 2 \times 3 \times 7$$
.

4. **85** \Rightarrow 1×85



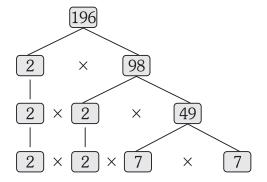
So,
$$85 = 5 \times 17$$
.

6. **96** \Rightarrow 1×96



So, 96 =
$$2 \times 2 \times 2 \times 2 \times 2 \times 3$$
.

8. **196** \Rightarrow 1×196



So,
$$196 = 2 \times 2 \times 7 \times 7$$
.

Let's Do

In each column put a () if the number at left is divisible by the number at the top of the column. Otherwise put (). One example is shown for you.

	Numbers	2	3	4	5	9	10
	752	1	×	1	×	×	X
1.	240	✓	1	✓	1	×	✓
2.	1155	×	1	X	1	×	×
3.	26580	✓	1	1	1	×	✓
4.	98664	✓	1	1	×	×	x
5.	39042	1	1	×	×	1	×

Exercise 6.6

A. Encircle the numbers which are divisible by 2.

- 1. **428** \Rightarrow In this number unit digit is 8 which is divisible by 2. So, 428 is divisible by 2.
- 2. **517** \Rightarrow In this number unit digit is 7 which is not divisible by 2. So, 517 is not divisible by 2.
- 3. **138** \Rightarrow In this number unit digit is 8 which is divisible by 2. So, 138 is divisible by 2.
- 4. **2345** \Rightarrow In this number unit digit is 5 which is not divisible by 2. So, 2345 is not divisible by 2.
- 5. **189** \Rightarrow In this number unit digit is 9 which is not divisible by 2. So, 189 is not divisible by 2.
- 6. **3456** \Rightarrow In this number unit digit is 6 which is divisible by 2. So, 3456 is divisible by 2.

B. Encircle the numbers which are divisible by 5.

- 1. **230** \Rightarrow Ending number 0, 5 are divisible by 5 In this number ending number is 0 So, 230 is divisible by 5.
- 2. **425** \Rightarrow Ending number 0, 5 are divisible by 5. In this number ending number is 5. So, 425 is divisible by 5.
- 3. **1272** \Rightarrow Ending number 0, 5 are divisible by 5. In this number ending number is 2. So, 1272 is not divisible by 5.
- 4. **868** \Rightarrow Ending number 0, 5 are divisible by 5 In this number ending number is 8. So, 868 is not divisible by 5.
- 5. **1720** \Rightarrow Ending number 0, 5 are divisible by 5. In this number ending number is 0.
- So, 1720 is divisible by 5.

 6. **635** ⇒ Ending number 0, 5 are divisible by 5. In this number ending number is 5. So, 635 is divisible by 5.
- 7. **429** \Rightarrow Ending number 0, 5 are divisible by 5. In this number ending number is 9. So, 429 is not divisible by 5.

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8. 3551 Ending number 0, 5 are divisible by 5. In this number ending number is 1. So, 3551 is not divisible by 5.

C. Encircle the numbers which are divisible by 10.

All numbers ending with 0 are divisible by 10.

- 1. 110 In this number ending with 0. So, 110 is divisible by 10.
- 2. 135 In this number ending with 5. So, 135 is not divisible by 10. \Rightarrow
- 3. 1450 In this number ending with 0. So, 1450 is divisible by 10. \Rightarrow
- 4. 4660 In this number ending with 0. So, 4660 is divisible by 10. \Rightarrow
- 5. 2375 In this number ending with 5. So, 2375 is not divisible by 10.
- 1728 6. In this number ending with 8. So, 1728 is not divisible by 10. \Rightarrow
- 7. **2220** In this number ending with 0. So, 2220 is divisible by 10. \Rightarrow
- 8. 3575 In this number ending with 5. So, 3575 is not divisible by 10. \Rightarrow

D. Check whether of the following numbers are divisible by 3.

Sum of digits of a number is divisible by 3.

The number is divisible by 3.

- 1. **39** Sum of digits = 3 + 9 = 12 \Rightarrow
 - \therefore 12 is divisible by 3.
- 2. **73** Sum of digits = 7 + 3 = 10
 - \therefore 10 is not divisible by 3.
- 3. Sum of digits = 2 + 8 + 2 = 12282 \Rightarrow
 - \therefore 12 is divisible by 3.
- 4. 866 Sum of digits 8 + 6 + 6 = 20
 - \therefore 20 is not divisible by 3.
- 4284 Sum of digits = 4 + 2 + 8 + 4 = 18 \Rightarrow \therefore 18 is divisible by 3.
- So, 4284 is divisible by 3.

So, 866 is not divisible by 3.

So, 39 is divisible by 3.

So, 73 is not divisible by 3.

So, 282 is divisible by 3.

E. Check whether of the following numbers are divisible by 6.

- **426** 1. In this number 6 is the unit digit which is divisible by 2.
 - \therefore 426 is divisible by 2
 - And In 426; Sum of digits = 4 + 2 + 6 = 12
 - 12 is divisible by 3.
 - \therefore 426 is divisible 2 and 3 both.
 - So, 426 is also divisible by 6.
- 2. 517 In this number 7 is the unit digit.
 - 7 is not divisible by 2.
 - So, 517 is not divisible by 6.
- 3. **732** In this number 2 is the unit digit.
 - 2 is divisible by 2.
 - And In 732; Sum of digits = 7 + 3 + 2 = 12
 - 12 is divisible by 3.
 - \therefore 732 is divisible 2 and 3 both.
- So, 732 is also divisible by 6.
- 4. 1382 In this number 2 is the unit digit which is divisible by 2.
 - And In 1382; sum of digits = 1 + 3 + 8 + 2 = 14
 - 14 is not divisible by 3.
 - \therefore 1382 is not divisible by 3

So, 1382 is not divisible by 6.

5. **3826** \Rightarrow In this number 6 is the unit digit which is divisible by 2.

And, In 3826; Sum of digits = 3 + 8 + 2 + 6 = 19

19 is not divisible by 3.

∴ 3826 is not divisible by 3.

So, 3826 is not divisible by 6.

F. Check whether of the following number are divisible by 9.

(Sum of digits of a number is divisible by 9 the number is divisible by 9.)

1. **216** \Rightarrow Sum of digits = 2 + 1 + 6 = 9

: 9 is divisible by 9.

So, 216 is divisible by 9.

2. **845** \Rightarrow Sum of digits = 8 + 4 + 5 = 17

 \therefore 17 is not divisible by 9.

So, 845 is not divisible by 9.

3. **1872** \Rightarrow Sum of digits = 1 + 8 + 7 + 2 = 18

 \therefore 18 is divisible by 9.

So, 1872 is divisible by 9.

4. **3006** \Rightarrow Sum of digits = 3 + 0 + 0 + 6 = 9.

: 9 is divisible by 9.

So, 3006 is divisible by 9.

5. **6715** \Rightarrow Sum of digits = 6 + 7 + 1 + 5 = 19

 \therefore 19 is not divisible by 9.

So, 6715 is not divisible by 9.

G. Fill one digit in each of the boxes to make the number divisible by 9.

(Sum of digits of a number is divisible by 9, the number is also divisible by 9).

1. **73**

Sum of digits = 7 + 3 + x = 10 + x

If we read the table of 9, we will find that $9 \times 1 = 9$ and $9 \times 2 = 18$

: 18 is divisible by 9

10 + x = 18

x = 18 - 10 = 8

So, 738 is divisible by 9.

2. **6 01**

Sum of digits 6 + x + 0 + 1 = 7 + x

If we read the table of 9, we will find that $9 \times 1 = 9$

:. 9 is divisible by 9

7 + x = 9

x = 9 - 7

x = 2

So, 6201 is divisible by 9.

3. **42 3**

Sum of digits = 4 + 2 + x + 3 = 9 + x

If we read the table by 9, we will find that $9 \times 1 = 9$; $9 \times 2 = 18$

∴ 9 and 18 are divisible by 9.

9 + x = 9

and

9 + x = 18

$$x = 9 - 9 = 0$$

x = 18 - 9 = 9

So, 4203 and 4293 are divisible by 9.

4. **9 99**

Sum of digit 9 + x + 9 + 9 = 27 + x

If we read the table by 9, we will find that $9 \times 1 = 9$; $9 \times 2 = 18$; $9 \times 3 = 27$; $9 \times 4 = 36$ \therefore 27 and 36 are divisible by 9.

$$27 + x = 36$$

$$27 + x = 36$$

$$x = 27 - 27 = 0$$

$$x = 36 - 27 = 9$$

So, 9099 and 9999 are divisible by 9.

HOTS QUESTION

- 1 is the smallest number, which when added to an even number, makes it an add number.
- 5,15,25,35, and 45 and divisible by 5 but not by 10.
 - (b) If a number is divisible by 4, it will also divisible by 2.
 - If a number is divisible by 2, it may be or may be not divisible by 4.
 - (d) If a number is divisible by 3, it may be or may be not divisible by 9.
 - (e) If a number is divisible by 9, it will also divisible by 3.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (c)

2. (b)

3. (c)

4. (a)

Cross Cultural Learning

Write all the factors of all the numbers from 1 to 20.

NUMBER	FACTORS	NUMBER	FACTORS
1	1	11	1, 11
2	1, 2	12	1, 2, 3, 4, 6, 12
3	1, 3	13	1, 13
4	1, 2, 4	14	1, 2, 7, 14
5	1, 5	15	1, 3, 5, 15
6	1, 2, 3, 6	16	1, 2, 4, 8, 16
7	1, 7	17	1, 17
8	1, 2, 4, 8	18	1, 2, 9, 18
9	1, 3, 9	19	1, 19
10	1, 2, 5, 10	20	1, 2, 4, 5, 10, 20

What do you observe?

Number with only one factor

2, 3, 5, 7, 11, 13, 17, 19

Numbers with only two factors (1 and the number itself)

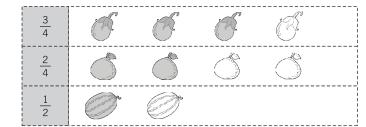
Numbers with 3 or more than 3 factors

4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20

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Roll Back

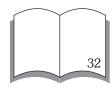
A. Colour to show the fraction.



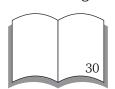
<u>1</u> 3	\Diamond	Ö	
<u>2</u> 3			

B. Find the number of pages which Renu read each day.

- 1. Ist day $(\frac{1}{4} \text{ of } 32)$
- 2. IInd day (
- IInd day $(\frac{1}{2} \text{ of } 18)$ 3. IIIrd day $(\frac{1}{3} \text{ of } 30)$



 $\frac{8}{12}$



$$\frac{1}{4} \times 32 = 8$$
 pages

$$\frac{1}{2} \times 18 = 9$$
 pages

$$\frac{1}{3} \times 30 = 10 \text{ pages}$$

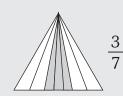
Let's Do

A. Shade the part of each whole as indicated.









- B. Write if it is a numerator or a denominator.
 - 1. In $\frac{5}{6}$, 6 is the denominator.
 - 3. In $\frac{1}{7}$, 7 is the denominator.

- 2. In $\frac{4}{7}$, 4 is the numerator.
- 4. In $\frac{17}{31}$, 17 is the numerator.

Exercise 7.1

A. Look at the figures given below. For each shape complete the table.

SHAPE	EQUAL PARTS IN THE SHAPE	FRACTION FOR SHADED PART	FRACTION FOR UNSHADED PART
	3	3	3

2.	4	4	4
3.	4	4	3
4.	8	8	8
5.	6	6	6
6.	8	8	8
7.	6	6	6
8.	12	12	12

B. Complete the table.

Write the missing fraction, numerator or denominator as required.

	Fraction	Numerator	Denominator
1.	$\begin{bmatrix} 8 \\ 1 \end{bmatrix}$	8	3
2.	\ <u>3</u> \ 7	3	7
3.	$\frac{2}{5}$	2	5

C. Shade the figure to show the given fraction.

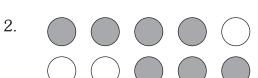




D. Write the fraction for the shaded parts.

1.







Exercise 7.2

A. Fill in the boxes to write equivalent fractions.

1.
$$\frac{3}{10} = \frac{3 \times 2}{10 \times 2} = \frac{6}{20}$$

$$2. \quad \frac{36}{40} = \frac{36 \div 4}{40 \div 4} = \frac{9}{\boxed{10}}$$

$$3 \quad \frac{25}{30} = \frac{25 \div \boxed{5}}{30 \div \boxed{5}} = \frac{5}{\boxed{6}}$$

4.
$$\frac{6}{7} = \frac{6 \times \boxed{7}}{7 \times \boxed{7}} = \frac{\boxed{42}}{49}$$

B. Write the first three equivalent fractions of the following.

1.
$$\frac{3}{5}$$
 \Rightarrow $\frac{3 \times 2}{5 \times 2}$ = $\frac{6}{10}$; $\frac{3 \times 3}{5 \times 3}$ = $\frac{9}{15}$; $\frac{3 \times 4}{5 \times 4}$ = $\frac{12}{20}$

(We multiply both numerator and denominator with same number)

Hence, $\frac{6}{10}$, $\frac{9}{15}$, $\frac{12}{20}$ are equivalent fractions of $\frac{3}{5}$.

2.
$$\frac{7}{10}$$
 \Rightarrow $\frac{7 \times 2}{10 \times 2}$ = $\frac{14}{20}$; $\frac{7 \times 3}{10 \times 3}$ = $\frac{21}{30}$; $\frac{7 \times 4}{10 \times 4}$ = $\frac{28}{40}$

(We multiply both numerator and denominator with same number)

Hence, $\frac{14}{20}$, $\frac{21}{30}$, $\frac{28}{40}$ are equivalent fractions of $\frac{7}{10}$.

3.
$$\frac{4}{11}$$
 \Rightarrow $\frac{4 \times 2}{11 \times 2}$ = $\frac{8}{22}$; $\frac{4 \times 3}{11 \times 3}$ = $\frac{12}{33}$; $\frac{4 \times 4}{11 \times 4}$ = $\frac{16}{44}$

(We multiply both numerator and denominator with same number)

Hence, $\frac{8}{22}$, $\frac{12}{33}$, $\frac{16}{44}$ are equivalent fractions to $\frac{4}{11}$.

4.
$$\frac{\mathbf{5}}{\mathbf{6}}$$
 \Rightarrow $\frac{5 \times 2}{6 \times 2}$ = $\frac{10}{12}$; $\frac{5 \times 3}{6 \times 3}$ = $\frac{15}{18}$; $\frac{5 \times 4}{6 \times 4}$ = $\frac{20}{24}$

(We multiply both numerator and denominator with same number)

Hence, $\frac{10}{12}$, $\frac{15}{18}$, $\frac{20}{24}$ are equivalent fractions to $\frac{5}{6}$.

5.
$$\frac{2}{7}$$
 \Rightarrow $\frac{2 \times 2}{7 \times 2}$ = $\frac{4}{14}$; $\frac{2 \times 3}{7 \times 3}$ = $\frac{6}{21}$; $\frac{2 \times 4}{7 \times 4}$ = $\frac{8}{28}$

(We multiply both numerator and denominator with same number)

Hence, $\frac{4}{14}$, $\frac{6}{21}$, $\frac{8}{28}$ are equivalent fractions to $\frac{2}{7}$.

6.
$$\frac{1}{9}$$
 \Rightarrow $\frac{1 \times 2}{9 \times 2}$ = $\frac{2}{18}$; $\frac{1 \times 3}{9 \times 3}$ = $\frac{3}{27}$; $\frac{1 \times 4}{9 \times 4}$ = $\frac{4}{36}$

(We multiply both numerator and denominator with same number)

Hence, $\frac{2}{18}$, $\frac{3}{27}$, $\frac{4}{36}$ are equivalent fractions to $\frac{1}{9}$.

C. Circle the fraction which is not equivalent to the others.

1.
$$\frac{15}{27}$$
, $\frac{5}{9}$, $\frac{45}{72}$, $\frac{10}{18}$

2.
$$\frac{21}{49}$$
, $\frac{9}{21}$, $\frac{3}{7}$, $\frac{12}{21}$

3.
$$\frac{14}{70}$$
 , $\frac{1}{5}$, $\frac{6}{15}$, $\frac{3}{15}$

4.
$$\left[\frac{18}{20}\right]$$
, $\frac{3}{4}$, $\frac{9}{12}$, $\frac{15}{20}$

Check whether the following fractions are equivalent or not using cross multiplication method:

1.
$$\frac{3}{8}$$
 $\frac{16}{24}$ $\frac{3 \times 24}{8 \times 16} = \frac{72}{128}$ 2. $\frac{2}{5}$ $\frac{10}{25}$ $\frac{2 \times 25}{5 \times 10} = \frac{50}{5}$

$$3 \times 24 = 72$$

$$\frac{2}{5}$$
 $\frac{10}{25}$

$$2 \times 25 = 50$$

Hence, $\frac{3}{8}$ and $\frac{16}{24}$ are not equivalent Hence, $\frac{2}{5}$ and $\frac{10}{25}$ are equivalent fractions.

fractions.

3.
$$\frac{6}{7}$$
 $\frac{42}{49}$ $\frac{6 \times 49 = 294}{7 \times 42 = 294}$

$$6 \times 49 = 294$$

Hence, $\frac{6}{7}$ and $\frac{42}{49}$ are equivalent fractions.

Exercise 7.3

Fill in the equivalent fractions.

$$1. \quad \frac{7 \div 7}{21 \div 7} \quad = \quad \boxed{\frac{1}{3}}$$

1.
$$\frac{7 \div 7}{21 \div 7} = \frac{\boxed{1}}{\boxed{3}}$$
 2. $\frac{6 \div 2}{10 \div 2} = \frac{\boxed{3}}{\boxed{5}}$ 3. $\frac{12 \div 4}{16 \div 4} = \frac{\boxed{3}}{\boxed{4}}$

$$3. \quad \frac{12 \div 4}{16 \div 4} = \frac{\boxed{3}}{\boxed{4}}$$

$$4. \quad \frac{10 \div 2}{16 \div 2} = \frac{5}{8}$$

5.
$$\frac{15 \div 5}{10 \div 5} = \frac{3}{2}$$

4.
$$\frac{10 \div 2}{16 \div \boxed{2}} = \frac{\boxed{5}}{\boxed{8}}$$
 5. $\frac{15 \div 5}{10 \div \boxed{5}} = \frac{\boxed{3}}{\boxed{2}}$ 6. $\frac{8 \div 8}{16 \div \boxed{8}} = \frac{\boxed{1}}{\boxed{2}}$

В. Reduce the following fractions to the lowest terms.

1.
$$\frac{6}{24}$$
 Common factor of 6 and 24 = 6

2.
$$\frac{15}{30}$$
 Common factor of 15 and 30 = 15

$$\therefore \frac{6 \div 6}{24 \div 6} = \frac{1}{4}.$$

$$\therefore \frac{15 \div 15}{30 \div 15} = \frac{1}{2}.$$

3.
$$\frac{30}{45}$$
 Common factor of 30 and 45 = 15
So, we divide both 30 and 45 by 15

$$\therefore \frac{30 \div 15}{45 \div 15} = \frac{2}{3}.$$

4.
$$\frac{49}{63}$$
 Common factor of 49 and 63 = 7

$$\therefore \frac{49 \div 7}{63 \div 7} = \frac{7}{9}.$$

5.
$$\frac{16}{18}$$
 Common factor of 16 and 18 = 2

$$\therefore \frac{16 \div 2}{18 \div 2} = \frac{8}{9}.$$

So, we divide both 49 and 63 by 7

$$\therefore \frac{36 \div 9}{81 \div 9} = \frac{4}{9}.$$

6.
$$\frac{36}{81}$$
 Common factor of 36 and 81 = 9
So, we divide both 36 and 81 by 9

$$\therefore \frac{22 \div 11}{121 \div 11} = \frac{2}{11} \,.$$

7.
$$\frac{22}{121}$$
 Common factor of 22 and 121 = 11
So, we divide both 22 and 121 by 11

$$\therefore \frac{42 \div 6}{48 \div 6} = \frac{7}{8}.$$

8.
$$\frac{42}{48}$$
 Common factor of 42 and 48 = 6
So, we divide both 42 and 48 by 6

$$\therefore \frac{24 \div 8}{32 \div 8} = \frac{3}{4}.$$

9.
$$\frac{24}{32}$$
 Common factor of 24 and 32 = 8
So, we divide both 24 and 32 by 8

$$\therefore \frac{85 \div 5}{100 \div 5} = \frac{17}{20}.$$

10.
$$\frac{85}{100}$$
 Common factor of 85 and 100 = 5
So, we divided both 85 and 100 by 5

$$\therefore \frac{75 \div 5}{80 \div 5} = \frac{15}{16}.$$

11.
$$\frac{75}{80}$$
 Common factor of 75 and 80 = 5
So, we divided both 75 and 80 by 5

$$\therefore \frac{25 \div 5}{40 \div 5} = \frac{5}{8}.$$

12.
$$\frac{25}{40}$$
 Common factor of 25 and 40 = 5
So, we divided both 25 and 40 by 5

Tricky Maths

Divide by a common factor to find equivalent fractions.

1.

$$\frac{2}{10} = \frac{1}{5}$$

$$\div 2$$

$$\frac{10}{15} = \boxed{2}$$

$$\frac{10}{15} = \boxed{3}$$

$$\frac{\cancel{9}}{\cancel{12}} = \frac{\cancel{3}}{\cancel{4}}$$

$$\cancel{\div 3}$$

$$\frac{\div 7}{21} = \frac{1}{\boxed{3}}$$

$$\div 7$$

OTS QUESTION

Change into improper fractions.

1.
$$1\frac{6}{7} = \frac{1 \times 7 + 6}{7}$$

1.
$$1\frac{6}{7} = \frac{1 \times 7 + 6}{7} = \frac{7 + 6}{7} = \frac{13}{7}$$
 2. $2\frac{1}{4} = \frac{2 \times 4 + 1}{4} = \frac{8 + 1}{4} = \frac{9}{4}$

$$=\frac{8+1}{4}=\frac{9}{4}$$

3.
$$3\frac{1}{2} = \frac{3 \times 2 + 1}{2} = \frac{6 + 1}{2} = \frac{7}{2}$$
 4. $1\frac{6}{7} = \frac{1 \times 7 + 6}{7} = \frac{7 + 6}{7} = \frac{13}{7}$

4.
$$1 \frac{6}{7} = \frac{1 \times 7 + 6}{7} = \frac{7 + 6}{7} = \frac{13}{7}$$

B. Change into mixed numerals.

1.
$$\frac{7}{2} = 3\frac{1}{2}$$

$$2. \quad \frac{14}{12} = 1 \frac{2}{12}$$

$$3. \quad \frac{5}{2} = 2\frac{1}{2}$$

1.
$$\frac{7}{2} = 3\frac{1}{2}$$
 2. $\frac{14}{12} = 1\frac{2}{12}$ 3. $\frac{5}{2} = 2\frac{1}{2}$ 4. $\frac{34}{7} = 4\frac{6}{7}$

Tricky Maths

Express the following mixed fractions as improper fractions:

a.
$$1\frac{2}{3} = \frac{1 \times 3 + 2}{3} = \frac{3 + 2}{3} = \frac{5}{3}$$

a.
$$1\frac{2}{3} = \frac{1 \times 3 + 2}{3} = \frac{3 + 2}{3} = \frac{5}{3}$$
 b. $3\frac{3}{5} = \frac{3 \times 5 + 3}{5} = \frac{15 + 3}{5} = \frac{18}{5}$

c.
$$2\frac{2}{7} = \frac{2 \times 7 + 2}{7} = \frac{14 + 2}{7} = \frac{16}{7}$$

c.
$$2\frac{2}{7} = \frac{2 \times 7 + 2}{7} = \frac{14 + 2}{7} = \frac{16}{7}$$
 d. $4\frac{1}{9} = \frac{4 \times 2 + 1}{9} = \frac{8 + 1}{9} = \frac{9}{9}$

e.
$$2\frac{1}{9} = \frac{2 \times 9 + 1}{9} = \frac{18 + 1}{9} = \frac{19}{9}$$

Exercise 7.4

Classify the fractions as proper or improper fraction.

Proper fractions: the numerator is smaller than the denominator.

Improper fractions: the numerator is greater than the denominator.

1.
$$\frac{4}{5}$$
 = In $\frac{4}{5}$ the numerator is 4 and the denominator is 5

Here; numerator < denominator

So,
$$\frac{4}{5}$$
 is a proper fraction.

2.
$$\frac{6}{9}$$
 = In $\frac{6}{9}$ the numerator is 6 and the denominator is 9

Here; numerator < denominator

So,
$$\frac{6}{9}$$
 is a proper fraction.

3.
$$\frac{8}{5}$$
 = In $\frac{8}{5}$ the numerator is 8 and the denominator is 5

So,
$$\frac{8}{5}$$
 is an improper fraction.

4.
$$\frac{17}{5}$$
 = In $\frac{17}{5}$ the numerator is 17 and the denominator is 5.

So,
$$\frac{17}{5}$$
 is an improper fraction.

5.
$$\frac{1}{9}$$
 = In $\frac{1}{9}$ the numerator is 1 and the denominator is 9.

So,
$$\frac{1}{9}$$
 is a proper fraction.

6.
$$\frac{48}{49}$$
 = In $\frac{48}{49}$ the numerator is 48 and denominator is 49.

Here; numerator < denominator

So, $\frac{48}{49}$ is a proper fraction.

7.
$$\frac{5}{13}$$
 = In $\frac{5}{13}$ the numerator 5 and the denominator is 13.

Here; numerator < denominator

So, $\frac{5}{13}$ is a proper fraction.

8.
$$\frac{15}{4}$$
 = In $\frac{15}{4}$ the numerator 15 and the denominator is 4.

Here; numerator > denominator

So, $\frac{15}{4}$ is an improper fraction.

9.
$$\frac{18}{13}$$
 = In $\frac{18}{13}$ the numerator is 18 and the denominator is 13

Here; numerator > denominator

So, $\frac{18}{13}$ is an improper fraction.

10.
$$\frac{6}{7}$$
 = In $\frac{6}{7}$ the numerator is 6 and the denominator is 7

Here ; numerator < denominator6 < 7

So, $\frac{6}{7}$ is a proper fraction.

Convert the following improper fraction into mixed fractions.

1.
$$\frac{8}{3} = 8 \div 3$$

Denominator \longleftrightarrow $3 \xrightarrow{2}$ Whole number $\xrightarrow{3}$ $8 \xrightarrow{-6}$ Dividend $\xrightarrow{-6}$ Numerator

1. $\frac{3}{3} = 8 \div 3$ Denominator $\underbrace{\begin{array}{c} 2 \\ 3 \\ 8 \end{array}}$ Whole number

Denominator $\underbrace{\begin{array}{c} 44 \\ 5 \\ \hline 2 \end{array}}$ Denominator $\underbrace{\begin{array}{c} 44 \\ 5 \\ \hline 2 \end{array}}$ Denominator $\underbrace{\begin{array}{c} 8 \\ 3 \\ 4 \end{array}}$ Whole number

Denominator $\underbrace{\begin{array}{c} 0 \\ 44 \\ \hline 3 \end{array}}$ Numerator

Then, mixed fraction is
$$2\frac{2}{3}$$
.

3. $\frac{25}{6} = 25 \div 6$

Denominator

Then, mixed fraction is $8\frac{4}{5}$.

4. $\frac{15}{7} = 15 \div 7$

Denominator

Denominator

Denominator

Denominator

Then, mixed fraction is $8\frac{4}{5}$.

4. $\frac{15}{7} = 15 \div 7$

Denominator

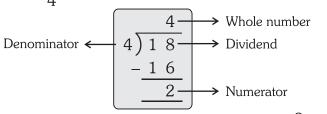
Denominator

Numerator

5. $\frac{17}{2} = \begin{array}{c} \text{Then, mixed fraction is } 4 \, \frac{1}{6} \, . \\ 17 \, \div \, 2 \\ \text{Denominator} & \begin{array}{c} 8 \\ \hline 2 \,) \, 1 \, 7 \\ \hline \end{array} \quad \begin{array}{c} \text{On the points of the points of the points of } 4 \, \frac{1}{6} \, . \\ \text{Denominator} & \begin{array}{c} 54 \\ \hline 5 \,) \, 5 \, 4 \\ \hline \end{array} \quad \begin{array}{c} \text{Then, mixed fraction is } 7 \, \frac{1}{2} \, . \\ \hline \begin{array}{c} 1 \, 0 \\ \hline \end{array} \quad \begin{array}{c} \text{Whole number} \\ \hline \begin{array}{c} 5 \,) \, 5 \, 4 \\ \hline \end{array} \quad \begin{array}{c} 1 \, 0 \\ \hline \end{array} \quad \begin{array}{c} \text{Whole number} \\ \hline \end{array} \quad \begin{array}{c} 1 \, 0 \\ \hline \end{array} \quad \begin{array}{c} \text{Numerator} \\ \end{array}$

Then, mixed fraction is $8\frac{1}{2}$.

7.
$$\frac{18}{4} = 18 \div 4$$



Then, mixed fraction is
$$4\frac{2}{4}$$
.

9. $\frac{80}{7} = 80 \div 7$

Then, mixed fraction is $4\frac{2}{4}$.

10. $\frac{35}{6} = 35 \div 6$

Denominator

Denominator

Denominator

Denominator

Numerator

Then, mixed fraction is $8\frac{4}{11}$
 $\frac{1}{1}$

Whole number

Denominator

Denominator

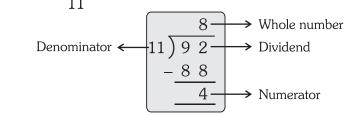
Denominator

Numerator

Then, mixed factor is $11\frac{3}{7}$

Than, mixed fraction is $10 \frac{4}{5}$. 8. $\frac{92}{11} = 92 \div 11$

$$8. \quad \frac{92}{11} = 92 \div 11$$



Then, mixed fraction is
$$8\frac{4}{11}$$
.

10. $\frac{35}{6} = 35 \div 6$

Denominator \longleftrightarrow $5 \longrightarrow$ Whole number $6)35 \longrightarrow$ Dividend 30

Then, mixed fraction is $6\frac{5}{5}$.

Convert the following mixed fractions into improper fractions.

1.
$$2\frac{2}{5}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$
$$= \frac{2 \times 5 + 2}{5} = \frac{10 + 2}{5} = \frac{12}{5}$$

3.
$$4\frac{7}{9}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$
$$= \frac{4 \times 9 + 7}{9} = \frac{36 + 7}{9} = \frac{43}{9}$$

5.
$$2\frac{1}{9}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$

$$= \frac{2 \times 9 + 1}{9} = \frac{18 + 1}{9} = \frac{19}{9}$$

2.
$$3\frac{3}{7}$$

$$= \frac{W \times Dr + Nr}{Dr} \qquad W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$

$$= \frac{2 \times 5 + 2}{5} = \frac{10 + 2}{5} = \frac{12}{5} \qquad = \frac{3 \times 7 + 3}{7} = \frac{21 + 3}{7} = \frac{24}{7}$$

4.
$$6\frac{5}{8}$$

$$= \frac{W \times Dr + Nr}{Dr}$$

$$= \frac{4 \times 9 + 7}{9} = \frac{36 + 7}{9} = \frac{43}{9}$$

$$= \frac{6 \times 8 + 5}{8} = \frac{48 + 5}{8} = \frac{53}{8}$$

$$6. \quad 4\frac{1}{2}$$

6.
$$4\frac{1}{2}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$
$$= \frac{4 \times 2 + 1}{2} = \frac{8 + 1}{2} = \frac{9}{2}$$

7.
$$2\frac{2}{7}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$

$$= \frac{2 \times 7 + 2}{7} = \frac{14 + 2}{7} = \frac{16}{7}$$

9. **8**
$$\frac{3}{4}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$

$$= \frac{8 \times 4 + 3}{4} = \frac{32 + 3}{4} = \frac{35}{4}$$

8.
$$3\frac{3}{5}$$

$$W \, \frac{Nr}{Dr} \ = \ \frac{W \times Dr \, + \, Nr}{Dr}$$

$$=$$
 $\frac{3 \times 5 + 3}{5}$ $=$ $\frac{15 + 3}{5}$ $=$ $\frac{18}{5}$

10.
$$11\frac{2}{3}$$

$$W \frac{Nr}{Dr} = \frac{W \times Dr + Nr}{Dr}$$
$$= \frac{11 \times 3 + 2}{3} = \frac{33 + 2}{3} = \frac{35}{3}$$

Exercise 7.5

A. Use >, < or =.

$$1. \quad \frac{4}{5} \ \equiv \ \frac{4}{5}$$

$$2. \quad \frac{3}{7} < \frac{3}{5}$$

$$3. \quad \frac{3}{7} \leq \frac{5}{7}$$

1.
$$\frac{4}{5} = \frac{4}{5}$$
 2. $\frac{3}{7} < \frac{3}{5}$ 3. $\frac{3}{7} < \frac{5}{7}$ 4. $\frac{11}{12} > \frac{10}{12}$

$$5. \quad \frac{2}{3} \ < \ \frac{4}{5}$$

6.
$$\frac{5}{9} < \frac{20}{23}$$

7.
$$\frac{1}{12} < \frac{1}{6}$$

5.
$$\frac{2}{3} < \frac{4}{5}$$
 6. $\frac{5}{9} < \frac{20}{23}$ 7. $\frac{1}{12} < \frac{1}{6}$ 8. $\frac{16}{5} < \frac{16}{3}$

Arrange in ascending order. В.

1.
$$\frac{4}{7}$$
 , $\frac{9}{7}$, $\frac{2}{7}$, $\frac{6}{7}$, $\frac{1}{7}$

The fraction with the smallest numerator is smallest and greatest numerator is greatest in like fractions with same denominator.

So, ascending order: $\frac{1}{7} < \frac{2}{7} < \frac{4}{7} < \frac{6}{7} < \frac{9}{7}$.

2.
$$\frac{3}{5}$$
 , $\frac{2}{5}$, $\frac{6}{5}$, $\frac{4}{5}$, $\frac{1}{5}$

The fraction with the smallest numerator is smallest and greatest numerator is greatest in like fraction with same denominator.

So, ascending order: $\frac{1}{5} < \frac{2}{5} < \frac{3}{5} < \frac{4}{5} < \frac{6}{5}$.

3.
$$\frac{5}{6}$$
 , $\frac{5}{9}$, $\frac{5}{3}$, $\frac{5}{12}$, $\frac{5}{7}$

The fraction with the smallest denominator is greatest and greatest denominator is smallest in unlike fraction with same numerator.

So, ascending order : $\frac{5}{12} < \frac{5}{9} < \frac{5}{7} < \frac{5}{6} < \frac{5}{3}$.

$$4. \quad \frac{1}{3} \quad \frac{5}{6} \quad \frac{7}{12} \quad \frac{3}{4} \quad \frac{1}{2}$$

Their are unlike fractions.

First, we convert them into like fractions.

Common multiple of 3, 6, 12, 4 and 2 = 12

$$\frac{4}{12}$$
, $\frac{10}{12}$, $\frac{7}{12}$, $\frac{9}{12}$, $\frac{6}{12}$ are like fractions.

So, ascending order
$$=\frac{6}{12} < \frac{4}{12} < \frac{7}{12} < \frac{9}{12} < \frac{10}{12}$$

Thus, ascending order is
$$\frac{1}{3} < \frac{1}{2} < \frac{7}{12} < \frac{3}{4} < \frac{5}{6}$$
.

C. Arrange is descending order.

1.
$$\frac{5}{6}$$
 , $\frac{3}{6}$, $\frac{17}{6}$, $\frac{9}{6}$, $\frac{2}{6}$

The fraction with the smallest numerator is smallest and the greatest numerator is greatest in like fraction with same denominator.

So, descending order :
$$\frac{17}{6} > \frac{9}{6} > \frac{5}{6} > \frac{3}{6} > \frac{2}{6}$$
.

2.
$$\frac{6}{7}$$
 , $\frac{3}{7}$, $\frac{5}{7}$, $\frac{1}{7}$, $\frac{4}{7}$

The fraction with the smallest numerator is smallest and the greatest numerator is greatest in like fractions with same denominator.

So, descending order:
$$\frac{6}{7} > \frac{5}{7} > \frac{4}{7} > \frac{3}{7} > \frac{1}{7}$$
.

3.
$$\frac{8}{9}$$
 , $\frac{8}{3}$, $\frac{8}{7}$, $\frac{8}{6}$, $\frac{8}{5}$

The fraction with the smallest denominator is greatest and the greatest denominator is smallest in unlike fractions with same numerator.

So, descending order:
$$\frac{8}{3} > \frac{8}{5} > \frac{8}{6} > \frac{8}{7} > \frac{8}{9}$$
.

 $4. \quad \frac{1}{3} \quad , \quad \frac{3}{6} \quad , \quad \frac{4}{9} \quad , \quad \frac{3}{18} \quad , \quad \frac{1}{5}$

Their are unlike fractions.

First; we convert them into like fractions.

Common multiple of 3, 6, 9, 18 and 5 = 90

$$\frac{1}{3} = \frac{1 \times 30}{3 \times 30} = \frac{30}{90} \; ; \; \frac{3}{6} = \frac{3 \times 15}{6 \times 15} = \frac{45}{90} \; ; \; \frac{4}{9} = \frac{4 \times 10}{9 \times 10} = \frac{40}{90} \; ;$$

$$\frac{3}{18} = \frac{3 \times 5}{18 \times 5} = \frac{15}{90} ; \frac{1}{5} = \frac{1 \times 18}{5 \times 18} = \frac{18}{90}$$

$$\frac{30}{90}$$
 , $\frac{45}{90}$, $\frac{40}{90}$, $\frac{15}{90}$ and $\frac{18}{90}$ are like fractions.

So, ascending order:
$$\frac{45}{90} > \frac{40}{90} > \frac{30}{90} > \frac{18}{90} > \frac{15}{90}$$
.

Thus, ascending order:
$$\frac{3}{6} > \frac{4}{9} > \frac{1}{3} > \frac{1}{5} > \frac{3}{18}$$
.

Exercise 7.6

A. Find the sum.

1.
$$\frac{5}{9} + \frac{3}{9} = \frac{5+3}{9} = \frac{8}{9}$$

2.
$$\frac{1}{12} + \frac{7}{12} = \frac{1+7}{12} = \frac{8}{12}$$
 or $\frac{2}{3}$

3.
$$\frac{13}{19} + \frac{5}{19} = \frac{13+5}{19} = \frac{18}{19}$$

4.
$$\frac{5}{21}$$
 + $\frac{10}{21}$ = $\frac{5+10}{21}$ = $\frac{15}{21}$ or $\frac{5}{7}$

5.
$$\frac{7}{16} + \frac{5}{16} = \frac{7+5}{16} = \frac{12}{16}$$
 or $\frac{3}{4}$

6.
$$\frac{3}{17} + \frac{1}{17} = \frac{3+1}{17} = \frac{4}{17}$$

7.
$$\frac{3}{10} + \frac{4}{10} = \frac{3+4}{10} = \frac{7}{10}$$

8.
$$\frac{7}{16} + \frac{5}{16} = \frac{7+5}{10} = \frac{12}{16}$$
 or $\frac{3}{4}$

B. Add.

1.
$$\frac{1}{9}$$
 + $\frac{5}{9}$ + $\frac{2}{9}$ = $\frac{1+5+2}{9}$ = $\frac{8}{9}$

2.
$$\frac{3}{7}$$
 + $\frac{6}{7}$ + $\frac{2}{7}$ = $\frac{3+6+2}{7}$ = $\frac{11}{7}$

3.
$$\frac{5}{14}$$
 + $\frac{7}{14}$ + $\frac{1}{14}$ = $\frac{5+7+1}{14}$ = $\frac{13}{14}$

4.
$$\frac{1}{10}$$
 + $\frac{3}{10}$ + $\frac{2}{10}$ = $\frac{1+3+2}{10}$ = $\frac{6}{10}$ or $\frac{3}{5}$

5.
$$\frac{7}{24}$$
 + $\frac{5}{24}$ + $\frac{6}{24}$ = $\frac{7+5+6}{24}$ = $\frac{18}{24}$ or $\frac{3}{4}$

6.
$$\frac{1}{18} + \frac{5}{18} + \frac{8}{18} = \frac{1+5+8}{18} = \frac{14}{18}$$
 or $\frac{7}{9}$

Exercise 7.7

A. Subtract.

1.
$$\frac{11}{14} - \frac{7}{14} = \frac{11-7}{14} = \frac{4}{14}$$
 or $\frac{2}{7}$

2.
$$\frac{5}{17}$$
 - $\frac{3}{17}$ = $\frac{5-3}{17}$ = $\frac{2}{17}$

3.
$$\frac{3}{11}$$
 - $\frac{2}{11}$ = $\frac{3-2}{11}$ = $\frac{1}{11}$

4.
$$\frac{17}{15}$$
 - $\frac{13}{15}$ = $\frac{17-13}{15}$ = $\frac{4}{15}$

5.
$$\frac{15}{24}$$
 - $\frac{7}{24}$ = $\frac{15-7}{24}$ = $\frac{8}{24}$ or $\frac{1}{3}$

6.
$$\frac{21}{23}$$
 - $\frac{10}{23}$ = $\frac{21-10}{23}$ = $\frac{11}{23}$

7.
$$\frac{8}{18}$$
 - $\frac{3}{18}$ = $\frac{8-3}{18}$ = $\frac{5}{18}$

8.
$$\frac{16}{31}$$
 - $\frac{12}{31}$ = $\frac{16-12}{31}$ = $\frac{4}{31}$

B. Find the difference.

1.
$$\frac{15}{8} - \frac{5}{8} = \frac{15-5}{8} = \frac{10}{8} = \frac{5}{4} = 1\frac{1}{4}$$

2.
$$\frac{9}{16} - \frac{5}{16} = \frac{9-5}{16} = \frac{4}{16}$$
 or $\frac{1}{4}$

3.
$$1\frac{3}{4}$$
 - $\frac{1}{4}$ = $\frac{7}{4}$ - $\frac{1}{4}$ = $\frac{7-1}{4}$ = $\frac{6}{4}$ = $\frac{3}{2}$ = $1\frac{1}{2}$

4.
$$1\frac{3}{7}$$
 - $\frac{5}{7}$ = $\frac{10}{7}$ - $\frac{5}{7}$ = $\frac{10-5}{7}$ = $\frac{5}{7}$

5.
$$2\frac{5}{4} - \frac{1}{4} = \frac{13}{4} - \frac{1}{4} = \frac{13 - 1}{4} = \frac{12}{4}$$
 or 3

6.
$$3\frac{3}{5} - 1\frac{4}{5} = \frac{18}{5} - \frac{9}{5} = \frac{18-9}{5} = 1\frac{4}{5}$$

7.
$$1\frac{8}{10}$$
 - $1\frac{1}{10}$ = $\frac{18}{10}$ - $\frac{11}{10}$ = $\frac{18-11}{10}$ = $\frac{7}{10}$

8.
$$3\frac{4}{5}$$
 - $1\frac{2}{5}$ = $\frac{19}{5}$ - $\frac{7}{5}$ = $\frac{19-7}{5}$ = $\frac{12}{5}$ = $2\frac{2}{5}$

Exercise 7.8

1. Money spent on fee $=\frac{1}{3}$

Money spent on books $= \frac{1}{3}$

$$\therefore$$
 Total money spent by Sahil $=$ $\frac{1}{3}$ $+$ $\frac{1}{3}$ $=$ $\frac{2}{3}$

2. Length of ribbon purchase by manu $= \frac{2}{5}$ m

And, length of ribbon purchase by moni $= \frac{1}{5}$ m

We compare $\frac{2}{5}$ and $\frac{1}{5}$ As, $\frac{2}{5} > \frac{1}{5}$

So,
$$\frac{2}{5} - \frac{1}{5} = \frac{2 - 1}{5} = \frac{1}{5}$$

Hence manu bought $\frac{1}{5}$ m ribbon more than moni.

3. Time taken by Shakshi to completed English home work $=\frac{1}{5}$ hours

Time taken by Shakshi to completed mathematics home work $=\frac{3}{5}$ hours

 \therefore Total time taken by Shakshi for complete her home work = $\left(\frac{1}{5} + \frac{3}{5}\right)$ hours = hours $\frac{4}{5}$

Hence, Shakshi take $\frac{4}{5}$ hours to complete her home work.

4. Rama bought rice = $\frac{3}{4}$ kg She cooked rice = $\frac{1}{4}$ kg

∴ Rice left with Rama = $\left|\frac{3}{4} - \frac{1}{4}\right| \text{kg} = \frac{3 - 1}{4} \text{kg} = \frac{2}{4}$ or $\frac{1}{2} \text{kg}$

Hence, $\frac{1}{2}$ kg of rice left with Rama.

5. Cake eaten by Rekha $= \frac{1}{4}$

Cake eaten by Meera $=\frac{3}{4}$

We compare $\frac{1}{4}$ and $\frac{3}{4}$; As, $\frac{3}{4}$ > $\frac{3}{4}$

So, $\frac{3}{4}$ - $\frac{1}{4}$ = $\frac{3-1}{4}$ = $\frac{2}{4}$ or $\frac{1}{2}$

Hence, Meera ate $\frac{1}{2}$ of the cake more than Rekha.

6. Length of total ribbon with Maya = $2\frac{1}{5}$ m = $\frac{11}{5}$ m

Length of ribbon cut a piece $= 1\frac{3}{5}$ m $= \frac{8}{5}$ m

∴ Ribbon left with Maya = $\frac{11}{5}$ - $\frac{8}{5}$ = $\frac{11-8}{5}$ = $\frac{3}{5}$ m

Hence, $\frac{3}{5}$ m of ribbon left with Maya.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (b)

2. (c)

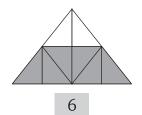
3. (c)

4. (d)

Worksheet

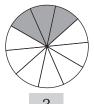
What fractions is shaded?

1.



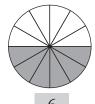
2.

6.



3 10 3.

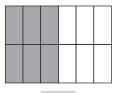
7.



4.

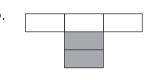
8.

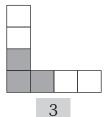
12



12

5.









NEP Life Skills

A pizza is separated into 8 equal parts. Amit ate 3 pieces and Rohit ate 4, remaining were eaten by Vijay. Answer the following questions.

- 1. Rohit ate $\frac{3}{8}$ of pizza. 2. Vijay ate $\frac{4}{8}$ of pizza. 3. Amit ate $\frac{1}{8}$ of pizza.

Chapter

Geometry

Roll Back

A. Write the number of sides in each shapes.

1.



2.



3.



4.



5.



6.



B. All of you are familiar with the following solid shapes, write the number of faces and vertices each has.

1.



2.



3.



4.



Faces 6 1 plane Face and 1 curved face

1

6

2 plane faces and 1 curved face.

8

0

Vertices

Tricky Maths



 $\angle 1 : \angle AOB$

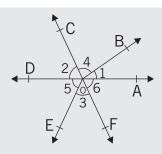
 $\angle 2 : \angle DOC$

 $\angle 3$: \angle EOF

∠4 : ∠COB

∠5 : ∠DOE

∠6 : ∠FOA



Exercise 8.1

Which of these represent a ray, a line segment and a line? Write down in symbols.



Line

Ray

Line

Line Segment

Line

Ray

Line

Exercise 8.2

A. Measure the following line segments.

1.

2.



AB = 4 cm

CD = 5.6 cm

EF = 5.8 cm

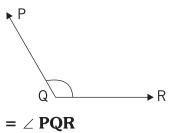
PQ = 2.7 cm

Draw the line segments of the following lengths.

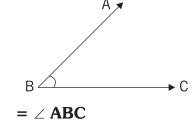
Do it yourself.

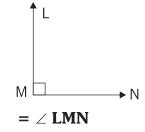
Exercise 8.3

A. Name the following angles.

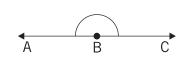


2.





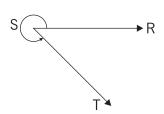
4.



5.



6.

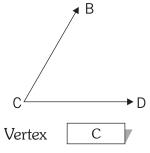


= ∠ **ABC**

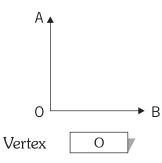
 $= \angle RST$

B. Name the arms vertices of the given angles.

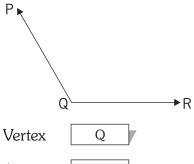
1.



2.



3.



Arms CB, CD

Arms OA, BO

Arms QP, QR

C. In the figure, name the points that lie.

1. Points in the interior of $\angle ABC$.

= **G**, **D**

2. Points in the exterior of $\angle ABC$.

= L, P

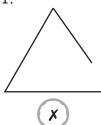
3. Points on the $\angle ABC$.

= **J**

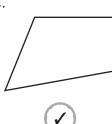
Exercise 8.4

A. Put a tick (\checkmark) for the closed figure and (X) for open figure.

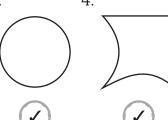
1.

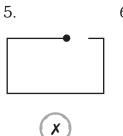


2.



3.





6.



B. Colour the polygons.

1.



2.



3.



4.



5.



6.



7.



8.

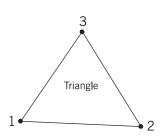


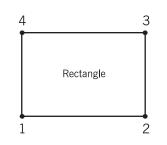
9.

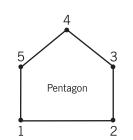


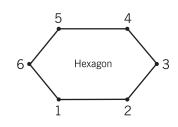
Exercise 8.5

A. Join the dots with straight lines. Name each polygon you make.



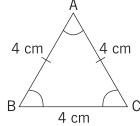






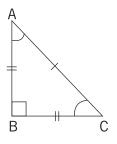
Identify triangles based on both sides and measurement.

1.



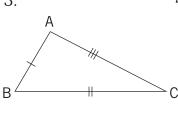
Equilateral Triangle

2.



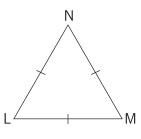
Isosceles Triangle

3.



Scalene Triangle

4.



Equilateral Triangle

Let's Do≣

Fill in the blanks.

- 1. How many diameters can a circle have?
- 2. Can there be more than one radius in a circle?

infinite

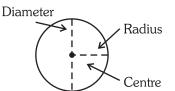
yes

Ο

Exercise 8.6

In the given circle mark.

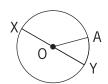
- 1. Centre
- 2. Radius
- 3. Diameter



In the given circle, write names of.

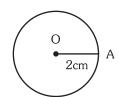


- 2. Radius OA
- 3. Diameter = XY

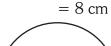


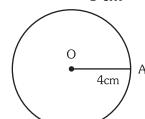
Draw a circle for each of the given radius in your notebook and measure the diameter.

1. $r = 2 \text{ cm}, d = 2 \times 2 \text{ cm}$ = 4 cm

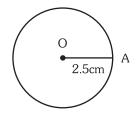


2. $r = 4 \text{ cm}, d = 2 \times 4 \text{ cm}$

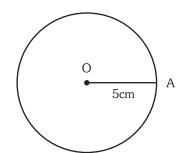


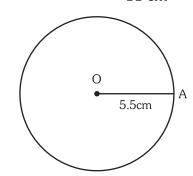


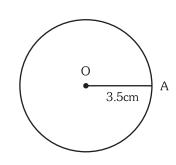
3. $r = 2.5 \text{ cm}, d = 2 \times 2.5 \text{ cm}$ = 5 cm



- 4. $r = 5 \text{ cm}, d = 2 \times 5 \text{ cm}$ = 10 cm
- 5. $r = 5.5 \text{ cm}, d = 2 \times 5.5 \text{ cm}$ 6. $r = 35 \text{ cm}, d = 2 \times 3.5 \text{ cm}$ = 11 cm = 7 cm

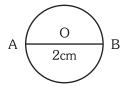






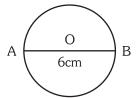
- D. Calculate radius for the given diameter in each and drawn circle also.
 - 1. d = 4 cm, r = 4/2 cm = 2 cm
 - $A \underbrace{\begin{array}{c} O \\ 4cm \end{array}} B$

2. d = 2 cm; r = 2/2 cm = 1 cm

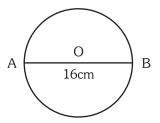


- 3. d = 5 cm; r = 5/2 cm = 2.5 cm
 - $A \underbrace{\begin{array}{c} O \\ 5cm \end{array}} B$

4. d = 6 cm; r = 6/2 cm = 3 cm



- 5. d = 15 cm; r = 15/2 cm = 7.5 cm
 - A O 15cm B
- 6. d = 16 cm; r = 16/2 cm = 8 cm



HOTS QUESTION

Fill in the radius or diameter as required.

- 1. Radius = 2.5 cm, diameter = $2.5 \times 2 = 5$ cm
 - 11
- 2. Radius = $4.0 \, \text{cm}$, diameter = $4.0 \times 2 = 8.0 \, \text{cm}$
- 3. diameter = $10.0 \, \text{cm}$, Radius = $10.0 \div 2 = 5 \, \text{cm}$
- 4. diameter = 3.0 cm, Radius = $3.0 \div 2 = 1.5 \text{ cm}$

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (a)

2. (c)

3. (a)

4. (c)

NEP Development of Traditional Knowledge

Enlarge and reduce the picture in the space provided.

Do yourself.

Symmetry and Patterns

Roll Back

A. Tick (\checkmark) the symmetrical object.



2.



3.





5.



6.



Tricky Maths

Draw the lines of symmetry in the following:









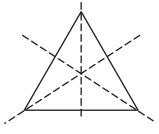




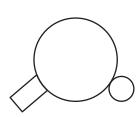
Exercise 9.1

A. Which of the following figures are symmetrical? Draw the axis of symmetry in the symmetrical figures.

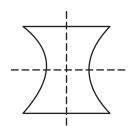
1.



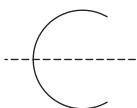
2.



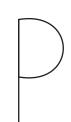
3.



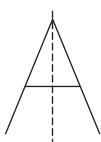
4.



5.



6.



Let's Do≣

Observe the patterns given below and complete them.

1.

















2









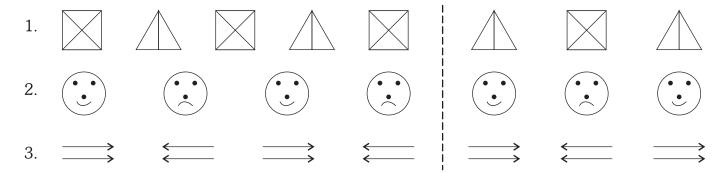






Exercise 9.2

A. Observe the pattern and draw the next three figures.



B. Write the next three terms in each pattern.

- 1. 10, 20, 30, 40, **50, 60, 70**
- 3. 99, 89, 79, 69, **59, 49, 39**
- 5. A1, B2, C3, D4, **E5, F6, G7** What will the last term be?
- 2. 15, 25, 35, 45, **55, 65, 75**
- 4. 16, 14, 12, 10, **8, 6, 4**
- Z 26

C. Observe the patterns and fill in the blanks.

1.
$$15873 \times 7 \times 1 = 111111$$

 $15873 \times 7 \times 2 = 222222$
 $15873 \times 7 \times 3 = 333333$
 $15873 \times 7 \times 4 = 444444$
 $15873 \times 7 \times 5 = 555555$
 $15873 \times 7 \times 6 = 666666$

2.
$$1 + 2 + 3 + 4 + 5 = 15$$

 $2 + 3 + 4 + 5 + 6 = 20$
 $3 + 4 + 5 + 6 + 7 = 25$
 $4 + 5 + 6 + 7 + 8 = 30$
 $5 + 6 + 7 + 8 + 9 = 35$
 $6 + 7 + 8 + 9 + 10 = 40$
 $7 + 8 + 9 + 10 + 11 = 45$

3.
$$(2 \times 2) - (1 \times 1) = 2 + 1$$

 $(3 \times 3) - (2 \times 2) = 3 + 2$
 $(4 \times 4) - (3 \times 3) = 4 + 3$
 $(5 \times 5) - (4 \times 4) = \mathbf{5} + \mathbf{4}$
 $(6 \times 6) - (5 \times 5) = \mathbf{6} + \mathbf{5}$
 $(7 \times 7) - (6 \times 6) = \mathbf{7} + \mathbf{6}$

4.
$$9 \times 0 + 1 = 1$$

 $9 \times 1 + 2 = 11$
 $9 \times 2 + 3 = 21$
 $9 \times 3 + 4 = 31$
 $9 \times 4 + 5 = 41$
 $9 \times 5 + 6 = 51$
 $9 \times 6 + 7 = 61$

D. The rules for these patterns consist of two steps-work them out and write the next three terms.

1. 1, 3, 7, 15, **31, 63, 127**

(**Hint**: the rule is \times 2 + 1)

2. 2, 3, 5, 9 **17, 33, 65**

3. 0, 3, 12, 39, **120, 363, 1092**

(**Hint**: Add 1 and then multiply by a number)

4. 1, 2, 5, 14, **41, 122, 365**

(**Hint**: Multiply by 3 and then subtract a number)

5. 1, 4, 13, 40, **121, 364, 1093**

Exercise 9.3

A. Read the message using the first code above.

13	5	5	20
13 ↓	5 ↓	5 ↓	20 ↓
M	Е	Е	T

13	5	9	14
13 	5 →	9	14 ↓
M	Ė	İ	Ň

MORE

19	3	8	15	15	12
	_	_	15 ↓		
Š	Č		Ŏ	Ŏ	Ľ

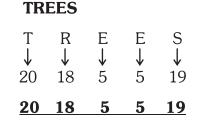
MEET ME IN SCHOOL

B. Read the message using the second code.

PL	PLANI						
P ↓ 16	L ↓ 12	A ↓ 1	N ↓ 14	T ↓ 20			

<u>16 12 1 14 20</u>

13	15	18	5
↓ 13	↓ 15	↓ 18	↓ 5
M	O	R	E



Mental Maths Corner

Tick (\checkmark) the correct answer.

1. (a)

2. (d)

3. (b)

4. (a)

NEP Adaptive Education

Look at this rangoli pattern made with the help of a dot sheet.

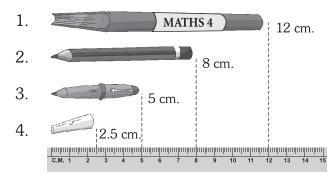
Yes, it is symmetrical about four lines of symmetry.

Chapter

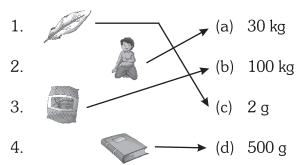
Measurement

Roll Back

A. What is the length of each object?



Match the pictures with the most likely weights.



Fill in the blanks with the most suitable unit (ml or l).

- A medicine in an eye-droper is 1 mL. 1.
- Mr. Das filled 30 L petrol in his car.
- 2. Capacity of a water tank is 1000 L.

Tricky Maths

Fill in the blanks.

1.
$$\frac{1}{4}$$
 km = **250** m

2.
$$\frac{3}{4}$$
 km = **750** m

3.
$$6\frac{1}{4}$$
 km = **6250** m

1.
$$\frac{1}{4}$$
 km = **250 m** 2. $\frac{3}{4}$ km = **750 m** 3. $6\frac{1}{4}$ km = **6250 m** 4. $7\frac{1}{2}$ km = **7500 m**

Exercise 10.1

Change to centimetres.

(:: 1 m = 100 cm)

1.	3 m	=	$3 \times 100 \text{ cm}$	=	300 cm
2.	12 m	=	$12 \times 100 \text{ cm}$	=	1200 cm

3. **8 m 14 cm** =
$$8 \times 100 \text{ cm} + 14 \text{ cm} = (800 + 14) \text{ cm} = 814 cm$$

4. **6 m 50 cm** = $6 \times 100 \text{ cm} + 50 \text{ cm} = (600 + 50) \text{ cm} = 650 cm$

5. **3 m 8 cm** =
$$3 \times 100 \text{ cm} + 8 \text{ cm}$$
 = $(300 + 8) \text{ cm} = 308 cm$

6. **9 m 2 cm** =
$$9 \times 100 \text{ cm} + 2 \text{ cm} = (900 + 2) \text{ cm} = 902 cm$$

7. **7 m 75 cm** =
$$7 \times 100 \text{ cm} + 75 \text{ cm} = (700 + 75) \text{ cm} = 775 cm$$

8. **2 m 14 cm** =
$$2 \times 100 \text{ cm} + 14 \text{ cm} = (200 + 14) \text{ cm} = 214 cm$$

B. Express in metres and centimeters.

(:: 100 m = 1 cm)

1. **600 cm** =
$$(600 \div 100) \text{ m}$$
 = **6 m**

2. **925 cm** =
$$(925 \div 100) \text{ m}$$
 = **9 m 25 cm**

3. **1437 cm** =
$$(1437 \div 100) \text{ m}$$
 = **14 m 37 cm**

4. **901** cm =
$$(901 \div 100)$$
 m = **9 m 1** cm

5. **385 cm** =
$$(385 \div 100) \text{ m}$$
 = **3 m 85 cm**

6.
$$4005 \text{ cm} = (4005 \div 100) \text{ m} = 40 \text{ m} 5 \text{ cm}$$

7. **310** cm =
$$(310 \div 100)$$
 m = **3 m 10** cm
8. **705** cm = $(705 \div 100)$ m = **7 m 5** cm

C. Express in metres.

(:: 1 km = 1000 m)

- 1. $5 \text{ km} = 5 \times 1000 \text{ m} = 5000 \text{ m}$
- 2. **14 km** = $14 \times 1000 \,\text{m}$ = **14000 m**
- 3. **8 km 705 m** = (8×1000) m + 705 m = (8000 + 705) m = **8705 m**
- 4. $3\frac{1}{2}$ km = (3×1000) m + $1/2 \times 1000$ m = (3000 + 500) m = 3500 m
- 5. **6 km 295 m** = (6×1000) m + 295 m = (6000 + 295) m = **6295 m**
- 6. **1 km 125 m** = (1×1000) m + 125 m = 1000 m + 125 m = **1125 m**
- 7. **9 km 25 m** = (9×1000) m + 25 m = 9000 m + 25 m = **9025 m**
- 8. **7** $\frac{1}{2}$ cm = (7×1000) m + $(\frac{1}{2} \times 1000)$ m = (7000 + 500) m = **7500** m

D. Change to Kilometres and metres.

(:: 1000 km = 1 km)

- 1. **5175 m** = $(5175 \div 1000) \text{ km}$ = **5 km 175 m**
- 2. **3000 m** = $(3000 \div 1000) \text{ km}$ = **3 km**
- 3. **1950 m** = $(1950 \div 1000) \text{ km}$ = **1 km 950 m**
- 4. **1805 m** = $(1805 \div 1000) \text{ km}$ = **1 km 805 m**
- 5. **8050 m** = $(8050 \div 1000) \text{ km}$ = **8 km 50 m**
- 6. **3246 m** = $(3246 \div 1000) \text{ km}$ = **3 km 246 m**
- 7. **1084 m** = $(1084 \div 1000) \text{ km}$ = **1 km 84 m**
- 8. **7025 m** = $(7025 \div 1000) \text{ km}$ = **7 km 25 m**

E. Change the following.

1. **61** cm **9** mm into mm

$$= 61 \times 10 \text{ mm} + 9 \text{ mm} (\because 1 \text{ cm} = 10 \text{ mm}) = 610 \text{ mm} + 9 \text{ mm} = 619 \text{ mm}$$

2. **12 dm 5 cm into cm**

$$= 12 \times 10 \text{ cm} + 5 \text{ cm} \ (\because 1 \text{ dm} = 10 \text{ cm}) = (120 + 5) \text{ cm} = 125 \text{ cm}$$

3. **50 mm into cm**

$$= (50 \div 10) \text{ cm} (\because 10 \text{ mm} = 1 \text{ cm}) = 5 \text{ cm}$$

4. **921 dm into m**

$$= (921 \div 10) \text{ m} (\because 10 \text{ dm} = 1 \text{ m}) = 92 \text{ m} 1 \text{ dm}$$

Exercise 10.2

A. Change the following into g.

(:: 1 kg = 1000g)

- 1. **12 kg** = $12 \times 1000 \text{ g} = 12000 \text{ g}$
- 2. **17 kg** = $17 \times 1000 \text{ g} = 17000 \text{ g}$
- 3. **7 kg 256 g** = (7×1000) g + 256 g

$$= 7000 g + 256 g = 7256 g$$

4. **15 kg 15 g** = (15×1000) g + 15 g

$$= 15000 g + 15 g = 15015 g$$

5. **9 kg 279 g** = (9×1000) g + 279 g

$$=$$
 9000 g + 279 g = **9279 g**

```
4 kg 15 g
                            (4 \times 1000) g + 15 g
6.
                      =
                            4000 g + 15 g = 4015 g
                      =
7.
    11 kg 9 g
                            (11 \times 1000) g + 9 g
                            11000 g + 9 g = 11009 g
                      =
8.
    6 kg 75 g
                            (6 \times 1000) g + 75 g
                      =
```

B. Change the following into mg.

(:: 1g = 1000 mg)

- 1. 19 g $(19 \times 1000) \text{ mg} = 19000 \text{ mg}$ =2. 10 g $(10 \times 1000) \text{ mg} = 10000 \text{ mg}$
- 3. 5 g 25 mg $(5 \times 1000) \text{ mg} + 25 \text{ mg}$ $= 5000 \, \text{mg} + 25 \, \text{mg}$ 5025 mg = (82000 + 82) mg4. 82 g 82 mg $(82 \times 1000) \text{ mg} + 82 \text{ mg}$ 82082 mg 5. 6 g 732 mg $(6 \times 1000) \text{ mg} + 732 \text{ mg}$ = 6000 mg + 732 mg6732 mg = $(3 \times 1000) \text{ mg} + 58 \text{ mg}$ = 3000 mg + 58 mg6. 3 g 58 mg 3058 mg = 7. $(1 \times 1000) \text{ mg} + 9 \text{ mg} = 1000 \text{ mg} + 9 \text{ mg}$ 1 g 9 mg 1009 mg $(3 \times 1000) \text{ mg} + 408 \text{ mg} = 3000 \text{ mg} + 408 \text{ mg}$

3408 mg

6000 g + 75 g = 6075 g

3 g 408 mg C. Change the following into kg.

=

(:: 1000 g = 1 kg)

8.

- 1. 4000 g $(4000 \div 1000) \text{ kg}$ 4 kg
- 2. 2387 g $(2387 \div 1000) \text{ kg}$ 2 kg 387 g
- 3. 6700 g $(6700 \div 1000) \text{ kg}$ 6 kg 700 g =
- 4. 7849 g $(7849 \div 1000) \text{ kg}$ 7 kg 849 g =
- 5. 8080 g $(8080 \div 1000) \text{ kg}$ 8 kg 80 g =
- 6. 8008 g $(8008 \div 1000) \text{ kg}$ 8 kg 8 g
- 7. 2075 g $(2075 \div 1000) \text{ kg}$ 2 kg 75 g =
- 8. 77008 g $(77008 \div 1000) \text{ kg} =$ 77 kg 8 g =
- D. Change the following into g.

(:: 1000 mg = 1g)

- 1. 4200 mg $(4200 \div 1000) g$ 4 g 200 mg
- 2. 8000 mg $(8000 \div 1000) \, g$ 8 g = =
- 3. 3255 mg $(3255 \div 1000)$ g 3 g 255 mg = =
- 4. 4500 mg $(4500 \div 1000)$ g 4 g 500 mg ==
- 5. **7288 mg** $(7288 \div 1000)$ g 7 g 288 mg =
- 6018 mg $(6018 \div 1000) g$ 6 g 18 mg 6. = =
- 7. 27055 mg $(27055 \div 1000)$ g 27 g 55 mg ==
- 8. 19265 mg $(19265 \div 1000)$ g 19 g 265 mg

Exercise 10.3

A. Convert into L.

(:: 1 KL = 1000 L)

1. 15 kL $(15 \times 1000) L$ 15000 L 2. 6 kL $(6 \times 1000) L$ = 6000 L 3. 8 kL 8 L $(8 \times 1000) L + 8 L$ 8008 L =

4. **12 kL 265 L** = $(12 \times 1000) L + 265 = (12000 + 265) L$

= 12265 L

- 5. **4 kL 70 L** = $(4 \times 1000) L + 70 L$ = (4000 + 70) L = **4070 L**
- 6. **25 kL 70 L** = $(25 \times 1000) L + 70 L$ = (25000 + 70) L

= 25070 L

7. **6 kL 90 L** = $(6 \times 1000) L + 90 L$ = (6000 + 90) L

= 6090 L

8. **18 kL 1 L** = $(18 \times 1000) L + 1 L$ = 18000 L + 1 L

= 18001 L

B. Convert into mL.

(:: 1L = 1000 mL)

- 1. **7 L** = $7 \times 1000 \text{ mL} = 7000 \text{ mL}$
- 2. **16 L** = $16 \times 1000 \text{ mL} = 16000 \text{ mL}$
- 3. **7 L 270 mL** = $(7 \times 1000) \text{ mL} + 270 \text{ mL} = 7000 \text{ mL} + 270 \text{ mL} =$ **7270 mL**
- 4. **10 L 450 mL** = (10×1000) mL + 450 mL
 - = 10000 mL + 450 mL = 10450 mL
- 5. **2 L 970 mL** = $(2 \times 1000) \text{ mL} + 970 \text{ mL}$
 - = 2000 mL + 970 mL = **2970 mL**
- 6. **3 L 15 mL** = $(3 \times 1000) \text{ mL} + 15 \text{ mL}$
 - = 3000 mL + 15 mL = **3015 mL**
- 7. **1 L 4 mL** = (1×1000) mL + 4 mL
 - = 1000 mL + 4 mL = 1004 mL
- 8. **17 L 55 mL** = $(17 \times 1000) \text{ mL} + 55 \text{ mL}$
 - = 17000 mL + 55 mL = 17055 mL
- C. Convert into kL.

(:: 1000 L = 1 KL)

- 1. **620s00 L** = $(62000 \div 1000) \text{ kL} (1 \text{ L} = 1000 \text{ kL})$ = **62 kL**
- 2. **7280 L** = $(7280 \div 1000) \text{ kL} (1 \text{ L} = 1000 \text{ kL})$ = **7 kL 280 L**
- 3. **15255** L = $(15255 \div 1000)$ kL (1 L = 1000 kL) = **15 kL 255** L

Exercise 10.4

- A. Solve the following.
 - 1. m cm
 1 1 1
 9 6 4 5
 + 2 5 3 8
 1 2 1 8 3
- 2. **kg g**1 1 1
 1 4 5 5 0
 + 7 2 5 0
 2 1 8 0 0
- L mL

 1

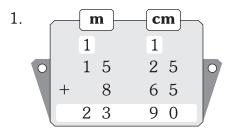
 4
 035
 +2
 125
 6
 160

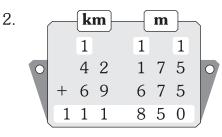
3.

6.

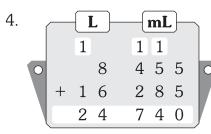
- 4. **kg g**8 2 5 0
 3 1 5 0
 5 1 0 0
- 5. **L mL**2 7 0 0
 1 0 5 0
 1 6 5 0
- km m
 2 3 4 5 5
 1 2 2 3 0
 1 1 2 2 5

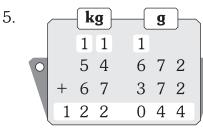
B. Add.

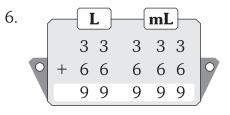


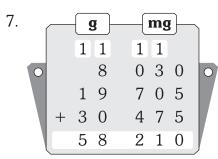


3.	ſ		k	g		g	_	
			7		2	5	0	
	0	+	6	2	1	2	7	0
		1	3	7	3	7	7	





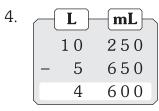




B. Subtract.

2.

6.



Exercise 10.5

A. Solve the following:

- 1. Total red ribbon purchased by Reema She used ribbon in her dress
 - $\mathrel{\raisebox{.3ex}{$.$}}\text{.}$ Length of the ribbon is left with her
- = 32 m = 18 m 7!
 - 18 m 75 cm
- = 32 m 18 m 75 cm
- = 13 m 25 cm

m cm 32 00 - 18 75 13 25

Hence, 13 m 25 cm of red ribbon is left with Reema.

2. Quantity of juice in a pack = 2 L 200 mL

Mohit drink of juice = 750 mL

 \therefore juice left in the pack = 2 L 200 mL - 750 mL

= 1 L450 mL

Hence, 1 L 450 mL of juice is left in the pack.

2 200 - 0 750 1 450

kg

2

1

3

kg

9

+ 4

km

1

5

3

9

g

400

550

950

g

500

750

750

m

2 5 0

4 5 0

6 0 0

3 0 0

1

3. Potatoes purchased by Mrs Gautam = 2 kg 400 g Tomatoes purchased by Mrs Gautam = 1 kg 550 g

 \therefore Total vegetables purchased by Mrs Gautam = 2 kg 400 g + 1 kg 550 g

= 3 kg 950 g

Hence, total 3 kg 950 g of vegetables purchased by Mrs. Gautam.

4. Apples purchased by a shopkeeper = 9 kg 500 g

Apples left with the shopkeeper = 9 kg 500 g - 4 kg 750 g

= 4 kg 750 g

= 4 kg 750 g

Hence, 4 kg 750 g of apples left with the shopkeeper.

Distance covered by car = 5 km 250 m Distance covered by bus = 3 km 450 m

Distance covered by walk = 600 m

Total distance covered by John = 5 km 250 m + 3 km

450 m + 600 m

= 9 km 300 m

Hence, John travelled 9 km 300 m in all.

He sold apples in a day

6. Orange squash made by Priya = 12 L 250 mL

Lemon squash made by Priya = 16 L 300 mL

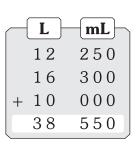
Pineapple squash made by Priya = 10 L

 \therefore Total quantity of squash made by Priya = 12 L 250 mL +

16 L 300 mL + 10 L

= 38 L 550 mL

Hence, Priya made 38L 550 mL of squash in all.



Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (b) 2. (d) 3. (a) 4. (b) 5. (a)

NEP Multiple Intelligence

Using least number of weights can you make the given weights. First one has been done for you.

1 kg	500 g	200 g	100 g	50 g	kg	g
2	_	1	_	_	2	200
3	1	1	_	1	3	750
2	1	_	1	1	2	650
_	1	2	_	1	0	950
3	_	1	_	_	3	200

1 kg	500 g	200 g	100 g	50 g	kg	g
2	_	1	_	1	2	250
1	1	2	_	_	1	900
5	1	1	_	_	5	700
4	_	_	1	_	4	100
1	1	1	1	1	1	850

Chapter 11

Perimeter and Area

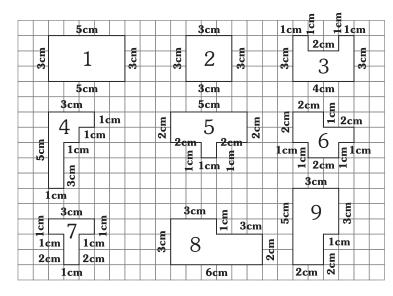
L∈t's Do≣

Find the perimeter of the following figures:

- 1. Perimeter = (21 + 16 + 21 + 16) cm = **74** cm
- 2. Perimeter = (22 + 22 + 22 + 22) m = **88 m**
- 3. Perimeter = (60 + 20 + 40 + 20) m = **140** m
- 4. Perimeter = (30 + 40 + 50) m = **120** m

Exercise 11.1

A. Find the perimeter of each figure. The side of each small square is 1 cm.



Perimeter = Sum of the sides.

In Figure 1,

Perimeter = 5 cm + 3 cm + 5 cm + 3 cm= 16 cm

In Figure 2,

Perimeter = 3 cm + 3 cm + 3 cm + 3 cm= 12 cm

In Figure 3,

Perimeter = 1 cm + 1 cm + 2 cm + 1 cm + 1 cm + 3 cm + 4 cm + 3 cm= **16 cm** In figure 4,

Perimeter = 3 cm + 1 cm + 1 cm + 1 cm + 3 cm + 1 cm + 5 cm = **16 cm**

In figure 5,

Perimeter = 5 cm + 2 cm + 2 cm + 1 cm + 1 cm + 2 cm + 2 cm = 16 cm

In figure 6,

Perimeter = 2 cm + 1 cm + 2 cm + 1 cm + 1 cm + 2 cm + 1 cm + 2 cm

= 14 cm

In figure 7,

Perimeter = 3 cm + 1 cm + 2 cm + 1 cm + 2 cm + 1 cm + 1 cm = 12 cm

In figure 8,

Perimeter = 3 cm + 1 cm + 3 cm + 2 cm + 6 cm + 3 cm = 18 cm

In figure 9,

Perimeter = 3 cm + 3 cm + 1 cm + 2 cm + 2 cm + 5 cm = 16 cm

B. Find the perimeter of the following figures.

- 1. Perimeter = Sum of the sides.
 - Perimeter = 3 cm + 4 cm + 5 cm + 4 cm + 3 cm = 19 cm
- 2. Perimeter = Sum of the sides
 - Perimeter = 4 cm + 6 cm + 7 cm + 3 cm = 20 cm
- 3. Perimeter = sum of the sides
 - Perimeter = 3 cm + 2 cm + 2 cm + 3 cm + 3 cm + 2 cm = 15 cm
- 4. Perimeter = Sum of the sides
 - Perimeter = 5 cm + 1 cm + 2 cm + 4 cm + 4 cm + 2 cm + 1 cm = 20 cm
- 5. Perimeter = Sum of the sides
 - Perimeter = 5 cm + 1 cm + 3 cm + 2 cm + 1 cm + 1 cm + 2 cm + 2 cm + 6 cm = 24 cm
- 6. Perimeter = Sum of the sides
 - Perimeter = 4 cm + 4 cm + 6 cm + 8 cm + 6 cm = 28 cm

C. Find the missing length.

- 1. Perimeter = Sum of length 2. Perimeter = Sum of length
 - 39 cm = 15 cm + 9 cm + 5 cm + x 21 cm = 8 cm + x + 4 cm + 2 cm
 - 39 cm = 29 cm + x 21 cm = 14 cm + x
 - x = 39 cm 29 cm = 10 cm x = 21 cm 14 cm = 7 cm

D. Solve.

- 1. Length of rectangular field = 18 m
 - Breadth of rectangular field = 12 m
 - \therefore Perimeter = 2 × (18 + 12) m = 60 m
 - The length of the fence needed is 60 m
 - He has fenced $= 20 \,\mathrm{m}$
 - \therefore Required fence = 60 m 20 m = 40 m
- 2. Length of carpet = $1 \text{ m} 50 \text{ cm} = 1 \times 100 \text{ cm} + 50 = 100 \text{ cm} + 50 \text{ cm} = 150 \text{ cm}$
 - breadth of carpet = 50 cm
- :. Perimeter of carpet = (150 + 50 + 50 + 150) = 400 cm or 4 m
 - Total lace with by Shama = 50 m
 - She need lace for one carpet = 400 cm or 4 m
 - She need lace for 5 carpets $= 4 \text{ m} \times 5 = 20 \text{ m}$
 - lace use for 5 carpets = 20 m
 - \therefore lace left over = 50 m 20 cm = 30 m
- 3. Perimeter of a triangular park = 90 m + 120 m + 150 m = 360 m
 - Hence, Mr Kapoor walks 360 m every morning.
- 4. Side of a square painting = 30 cm
 - :. length of the frame = (30 + 30 + 30 + 30) cm = 120 cm or 1 m 20 cm
- 5. Length of ribbon = 1 m = 100 cm
 - Length of square handkerchief = 15 cm
 - Perimeter of square handkerchief = 15 cm + 15 cm + 15 cm = 60 cm
 - Ribbon use for handkerchief = 60 cm
 - \therefore Ribbon will be left over = 100 cm 60 cm = 40 cm

Exercise 11.2

A. What is the area of the given shape?The side of each square is 1 unit.Draw a shape with a greater area.Draw a shape smaller in area.

Area = 10 sq. units.

B. Count the number of squares each shape covers. Write its area.

1.	1	2	3	4			2.	1	2 5	3			3.	1	Ļ	_	2			
	5	6	7	8				4 7	5 8	6 9				3 7	4 8	5 9	6 10			
	8	sq.	uni	ts				9 s	q. u	nits				10) sq.	. un	its			
												_							_	
4.	1	2	3			5.	1	3		8			6.	1	2					
	4	5					2	4	6 7	9	11	_	Н	3	4 7	5	6	Н	-	
	7														,					
	8							11 :	sq. ι	ınits				8	sq.	uni	ts			
	8	sq.	uni	ts															-	
													9.	1	2	3				
7.	1	2	3			8.	1	2	3		_	_		4	5 8	6	\vdash		-	
		4	Ď				4	5	6	7	8	9		10	11	Ò				
	_	5					10	11	12	13	14	15	Ш	12	13					L
	5	sq.	uni	ts				15 s	sq. ι	ınits				13	3 sq.	. un	its			
	_						_	_			_	_		_				\square	-	

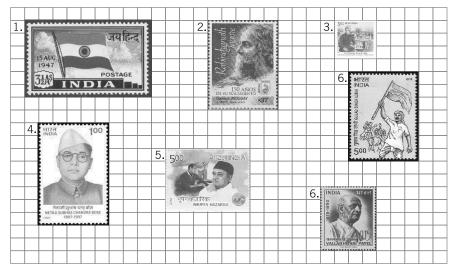
1	2	3	4
5	6	7	8
9			10

C. What is the area of the given shapes?Hint: Divide the shape into squares to find out.

CI 9 10 8 7 6 5 4 3 cm 2 7 cm Number of Squares = 10 $\ddot{\circ}$ Area of 1 Square $1~\mathrm{cm}^2$ Area of shape 10 sq. cm

						1 0	111
					5 cm		
	2		1	2	3	4	5
Number of Squares	=	7		cm	6	2	cm
Area of 1 Square	=	1 cm ²	2	2	7		
Area of shape	=	7 sq	ı. cm		1 cm		

D. Find the area of these stamps. The side of each square is 1 cm.



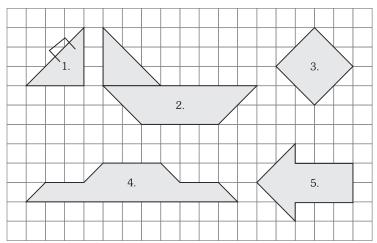
- 1. In figure 1 enclose 54 squares
 Area of figure 1 = 54 sq. cm
 or 54 cm²
- 2. In figure 2 enclose 35 squares Area of figure 2 = 35 sq. cm or 35 cm²
- 3. In figure 3 enclose 9 squares
 Area of figure 3 = **9 sq. cm**or **9 cm²**
- 4. In figure 4 enclose 40 squares
 Area of figure 4 = 40 sq. cm
 or 40 cm²

- 5. In figure 5 enclose 30 squares

 Area of figure 5 = 3 sq. cm or 3 cm²
- 6. In figure 6 enclose 35 squares
 Area of figure 6 = **35 sq. cm or 35cm**²
- 7. In figure 7 enclose 20 squares. Area of figure $7 = 20 \text{ sq. cm or } 20 \text{ cm}^2$

Exercise 11.3

A. Calculate the area of these shapes in square units. The side of each square is 1 unit.



∴ Area of figure 2 =
$$(3 + 7 \times \frac{1}{2})$$
 cm² = $(13 + 3.5)$ cm² = **16.5 cm²**

In Figure 3.

Complete squares = 4 And half squares = 8 \therefore Area of figure 3 = $(4 + 8 \times \frac{1}{2})$ cm² = 4 + 4 cm² = 8 cm² Complete squares

In figure 4

Complete squares = 12 And half squares = 4 \therefore Area of figure 4 = $(12 + 4 \times \frac{1}{2})$ cm² = (12 + 2) cm² = **14 cm²** Complete squares

In Figure 5

Complete squares Complete squares = 8 And half squares = 4 \therefore Area of figure 5 = $(8 + 4 \times \frac{1}{2})$ cm² = (8 + 2) cm² = **10 cm²**

In figure 1.

complete squares = 3And half squares = 3

 \therefore Area of figure 1 = $(3 + 3 \times \frac{1}{2})$ cm² $= (3 + 1.5) \text{ cm}^2$ = 4.5 cm²

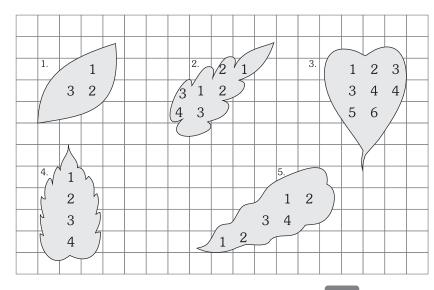
In figure 2.

Complete squares = 13

And half squares = 7

$$= (13 + 3.5) \text{ cm}^2 = 16.5 \text{ cm}$$

Find the area of these leaves.



In figure of 1

The leave covers 3 whole squares.

4 half squares = 2 squares

1 is more than half square.

So, the area of the leave 1 =

= (3 + 2 + 1) sq. units

6 sq. units

The area of the leave is 6 sq. units.

In figure of 2

The leave covers 3 whole squares. 4 more than half squares

= 4 squares.

Leave out the squares that cover less than half.

So the area of the leave = 3 +

.. The area of the leave is 7 sq. units.

In figure of 3

The leave coves 6 whole squares

2 half squares = 1 square

4 more than half squares = 4 squares

Leave out the squares that cover less than half

So the area of the leave = 6 + 1 + 4 = approximately**11 sq. unit**

.. The area of the leave is 11 sq. unit.

In figure 4.

The leaves cover 4 whole squares.

6 more than half squares = 6 squares

Leave out the squares that cover less than half

So the area of the leave = (4 + 6) = approximately **10 sq. units**

.. The area of the leave is 10 sq. unit

In figure 5.

The leaves cover 4 whole squares.

6 more than half squares = 6 squares.

2 half squares = 1 square

Leave out the squares that cover less than half

So, the area of the leave = 4+6+1 = 11 sq. units

∴The area of the leave is 11 sq. units.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (d)

2. (a)

3. (b)

4. (d)

approximately 7 sq. units

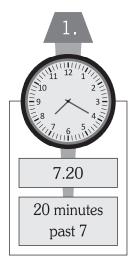
5. (c)

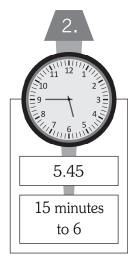
Time

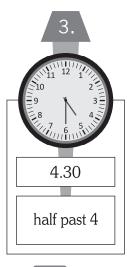
Chapter 12

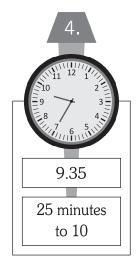
Roll Back

A. What is the time?





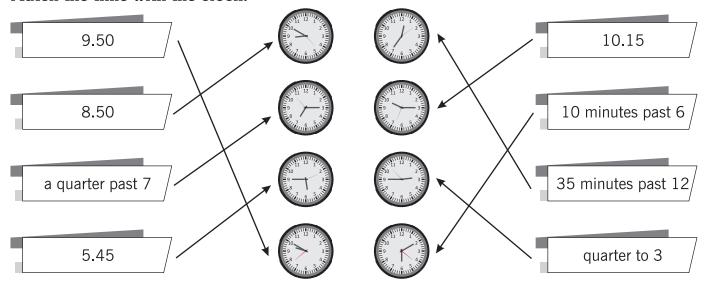






MATHEMATICS-4

Match the time with the clock. В.



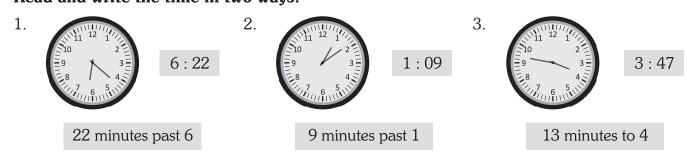
Let's Do





Exercise 12.1

A. Read and write the time in two ways.



Draw the hands of the clocks to show the given time. В.



C. Write the time 2 hours before.

1. 7:30 a.m. 2. 1:00 p.m.12:30 p.m. 5:30 a.m. 11:00 a.m. 3. 10:30 a.m. 5. 12:45 a.m. 10:45 p.m. 4:05 a.m. 2:05 a.m. 6. 1:00 a.m.11:00 p.m.

D. Give the time 3 hours after.

- 1. 1:05 p.m. 4:05 p.m. 2. 11:15 a.m. 2:15 p.m. 3. 6:00 a.m. 9:00 a.m.
- 4. 11:00 p.m. 2:00 a.m. 5. 9:30 p.m. 12:30 a.m. 6. 7:40 a.m. 10:40 a.m.

Exercise 12.2

A. Convert the following into minutes.

(:: 1 hours = 60 minutes)

- 1. **5 hours** = 5×60 minutes = **300 minutes**
- 2. **10 hours** = 10×60 minutes = **600 minutes**
- 3. **3 hours 25 minutes** = (3×60) minutes + 25 minutes = 180 minutes + 25 minutes
- = 205 minutes
- 4. **6 hours 14 minutes** = (6×60) minutes + 14 minutes = 360 minutes + 14 minutes = **374 minutes**
- 5. **15 hours 6 minutes** = (15×60) minutes + 6 minutes = 900 minutes + 6 minutes = **906 minutes**
- 6. **5 hours 20 minutes** = (5×60) minutes + 20 minutes = 300 minutes + 20 minutes = **320 minutes**

B. Convert the following into seconds.

(: 1 minute = 60 seconds)

- 1. 3 minutes = 3×60 seconds = 180 seconds.
- 2. **17 minutes** = 17×60 seconds = **1020 seconds**
- 3. **24 minutes** = 24×60 seconds = **1440 seconds**
- 4. **10 minutes 17 seconds** = (10×60) seconds + 17 seconds
 - = 600 seconds + 17 seconds = 617 seconds
- 5. **36 minutes 48 seconds** = (36×60) seconds + 48 seconds
 - = 2160 seconds + 48 seconds = **2208 seconds**

60) 3 2 5

3 0 0

2 5

C. Convert the following into hour and minutes.

(: 60 minutes = 1 hour)

1. **156 minutes**

- 156 minutes = $(156 \div 60)$ hours
- \therefore 156 ÷ 60 gives quotient = 2 and remainder = 36
- \therefore 156 minutes = **2 hours 36 minutes.**

2. **325 minutes**

- 325 minutes = $(325 \div 60)$ hours
- \therefore 325 ÷ 60 gives quotient = 5 and remainder 25
- \therefore 325 minutes = **5 hours 25 minutes**

3. **487** minutes

- 487 minutes = $(487 \div 60)$ hours
- $:: 487 \div 60$ gives quotient = 8 and remainder = 7
- \therefore 487 minutes = **8 hours 7 minutes**

$$\begin{array}{r}
 8 \\
 \hline
 60 \overline{\smash{\big)}\ 4\ 8\ 7} \\
 \hline
 4\ 8\ 0 \\
 \hline
 \hline
 7
\end{array}$$

4. **526** minutes

526 minutes = $(526 \div 60)$ hours

- \therefore 526 \div 60 gives quotient = 8 and remainder = 46
- ∴ 526 minutes = **8 hours 46 minutes**

5. **1025** minutes

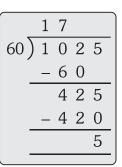
 $1025 \text{ minutes} = (1025 \div 60) \text{ hours}$

- \therefore 1025 ÷ 60 gives quotient = 17 and remainder = 5
- \therefore 1025 minutes = 17 hours 5 minutes

6. **1515 minutes**

1515 minutes = $(1515 \div 60)$ hours

- \therefore 1515 ÷ 60 gives quotient = 25 and remainder = 15
- \therefore 1515 minutes = **25 hours 15 minutes.**



$\begin{array}{r} 8 \\ \hline 60) 5 2 6 \\ -480 \\ \hline 46 \end{array}$

$$\begin{array}{r}
2 5 \\
60 \overline{\smash) \ 1 \ 5 \ 1 \ 5} \\
-1 2 0 \\
\hline
3 1 5 \\
-3 0 0 \\
\hline
1 5
\end{array}$$

D. Convert the following into minutes and seconds.

(: 60 seconds = 1 minute)

- 1. **258 seconds** = $(258 \div 60)$ minutes
 - \therefore 258 \div 60 gives quotient 4 and remainder 18.
 - \therefore 258 seconds = 4 minutes 18 seconds.
- 2. **624 seconds** = $(624 \div 60)$ minutes
 - : 624 \div 60 gives quotient 10 and remainder 24
 - \therefore 624 seconds = **10 minutes 24 seconds**
- 3. **817 seconds** = $(817 \div 60)$ minutes
 - : 817 ÷ 60 gives quotient 13 and remainder 37
 - \therefore 817 seconds = **13 minutes 37 seconds**
- 4. **1428 seconds** = $(1428 \div 60)$ minutes
 - : 1428 gives quotient 23 and remainder 48
 - \therefore 1428 seconds = **23 minutes 48 seconds**
- $\begin{array}{r}
 1 \ 3 \\
 60 \) \ 8 \ 1 \ 7 \\
 \ 6 \ 0 \\
 \hline
 2 \ 1 \ 7 \\
 \ 1 \ 8 \ 0 \\
 \hline
 3 \ 7
 \end{array}$

60) 258

-240

1 8

- 5. **1200 seconds** = $(1200 \div 60)$ minutes
 - \therefore 1200 gives quotient = 20 and no remainder
 - \therefore 1200 seconds = **20 minutes**
- 6. **1870 seconds** = $(1870 \div 60)$ minutes 1870 gives quotient 31 and remainder 10
 - \therefore 1870 seconds = **31 minutes 10 seconds**

$$\begin{array}{r}
3 & 1 \\
60) 1 & 8 & 7 & 0 \\
-1 & 8 & 0 \\
\hline
& 7 & 0 \\
-6 & 0 \\
\hline
& 1 & 0
\end{array}$$

HOTS QUESTION

- The match was the start at 1440 hours. The time in the 12 hour clock would be 2:40 p.m.
- 4:15 p.m. in the 24 hours clock is **0415 hours**.

Exercise 12.3

A. Change the 12 hour clock time to 24 hour clock time.

10:00 am \rightarrow 1000 hours

2. 11 : 00 am \rightarrow 1100 hours 3. \rightarrow 720+1200=1920 hours **4.** 3:15 am 7:20 pm

5. 12 mid night \rightarrow 0000 hours or 2400 hours **6.** 9:47 pm

 \rightarrow 947 + 1200 = 2147 hours

 \rightarrow 8:00 am

 \rightarrow 0315 hours

7. \rightarrow 105+1200=1305 hours **8.** 2:45 am $1:05~\rm{pm}$

 \rightarrow 0245 hours

 $1200 \text{ hours} \rightarrow 12:00 \text{ noon}$

2. 800 hours

4.

Change the 24 hour time to 12 hour clock time:

1. 430 hours \rightarrow 4:30 am

1115 hour 11:15 am 3.

 $1320 - 1200 = 120 \rightarrow 1 : 20 \text{ pm}$ **5**. 1320 hours \rightarrow

6. 1640 hours $1640 - 1200 = 440 \rightarrow 4:40 \text{ pm}$

7. 2250 hours $2250 - 1200 = 1050 \rightarrow 10:50 \text{ pm}$ \rightarrow

8. 2400 hours 12:00 mid night

Exercise 12.4

A. Find the sum of the following.

2 hours 15 minutes and 1 hour 40 minutes

3 hour 55 minutes

H	lours	minutes
	2	15
+	1	40
	3	55
(

2. 5 hours 45 minutes and 35 minutes

min	utes
1	
4	5
3	5
2	0
	1 4 3

Add minutes

 $45 \, \text{min} + 35 \, \text{min} = 80 \, \text{min}$

 $80 \, \text{min} = 1 \, \text{hour} + 20 \, \text{min}$

Add the hours

(1+5) hours = 6 hour

1 hours 50 minutes and 1 hour 10 minutes

Hours	min	utes
1		
1	5	0
+ 1	1	0
3	0	0

Add minutes

 $50 \, \text{min} + 10 \, \text{min} = 60 \, \text{min}$

1 hours 25 minutes and 2 hour 55 minutes and 30 minutes

Hours	minutes
1	1
1	2 5
2	5 5
+ 0	3 0
4	5 0

Add minutes

 $(25 + 55 + 30) \min = 110 \min$

$$60 \, \text{min} = 1 \, \text{hour}$$

Add the hours

$$(1 + 1 + 1)$$
 hours = 3 hours

$$110 \; min \; = \; 60 \; min \; + \; 50 \; min$$

1 hour 50 min

Add hour

$$(1 + 2 + 1)$$
 hours = 4 hours

5. 4 hours 50 minutes, 3 hours 35 minutes and 50 minutes

Add minutes

$$(50 + 35 + 50) = 135 \text{ minutes}$$

 $135 \text{ minutes} = 120 \text{ min} + 15 \text{ min}$

Add hours

$$(2 + 4 + 3)$$
 hours = 9 hour

Hours	min	utes
2		
4	5	0
3	3	5
+	5	0
9	1	5

- B. Find the difference between.
 - 1. 3 hours 15 minutes and 5 hours 45 minutes

[]	Hours	minutes
	5	45
_	3	15
	2	30

Subtraction minutes

$$(45 - 15) \min = 30 \min$$

Subtraction hours

$$(5-3)$$
 hours = 2 hours

3. 4 hours 50 minutes and 8 hours 45 minutes

Subtract minutes

We cannot subtract 50 form 45

Thus, we borrow 1 hour form 8 hours

Now,
$$(1 \text{ hour} + 45) \text{ min} = (60 + 45) \text{ min} = 105 \text{ min}$$

 $(105 - 50) \text{ min} = 55 \text{ min}$

Subtract hours

(7-4) hours = 3 hours

4. **1800** hours and **2230** hours

	Hours				
2	2	3	0		
-1	8	0	0		
0	4	3	0		hours

2. **7 hours 35 minutes and 3 hours 30 minutes**

Hours	minutes
7	35
- 3	30
4	05

Subtract minutes

$$(35 - 30) \min = 05 \min$$

Subtract hours

$$(7-3)$$
 hours = 4 hours

Hours	minutes
7	10 5
8	4 5
- 4	5 0
3	5 5

5. **1315** hours and **1930** hours

Hours							
1	9	3	0				
- 1	3	1	5				
0	6	1	5				

hours

C. Find the interval between.

1. **10:30** am and **5:30** p.m.

$$+ 1 \text{ hr } 30 \text{ min}$$
 $+ 5 \text{ hr } 30 \text{ min}$ $10:30 \text{ a.m.} \longrightarrow 12 \text{ noon} \longrightarrow 5:30 \text{ p.m.}$

 \therefore Time interval = 1 hr 30 min + 5 hr 30 min = **7 hours.**

2. **7:15 a.m. and 11:45 p.m.**

$$+$$
 4 hours $+$ 30 min $7:15$ a.m. \longrightarrow 11:45 a.m. \longrightarrow 11:45 a.m.

 \therefore Time interval = **4 hours 30 minutes**.

3. 1:15 p.m. and 2:00 p.m.

 $1:15 \text{ p.m.} \longrightarrow 2:00 \text{ p.m.}$

 \therefore Time interval = **45 minutes.**

4. 1230 hours and 0900 hour

$$+$$
 12 hours $+$ 8 hours $+$ 30 min 12 : 30 hr \longrightarrow 00 : 30 hr \longrightarrow 08 : 30 hr \longrightarrow 09 : 00 hours \therefore Time interval $=$ 12 hours $+$ 8 hours $+$ 30 minutes

= 20 hours 30 minutes

5. **1615** hours and **2030** hours

$$+ 4 \text{ hr}$$
 $+ 15 \text{ min}$ $+ 15 \text{ hours}$ \longrightarrow 20 : 30 hours

 \therefore Time interval = 4 hours 15 minutes

D. Solve the following:

1. Time at which Suresh reached home = 6:30 pm

Time at which Ramesh reached home = 2 hrs 45 minutes earlier

than Suresh

= 6:30 p.m. - 2 hours

45 minutes

= 3 : 45 p.m. Time at which John reached the school = 9 : 30 am

Time at which Raj reached the school = 45 minutes before john

= 9:00 am – 45 minutes

= 8:15 am

3. Arrival time of Chennai mail = 9:30 am

Arrival time of Howrah mail = 3 hours 45 minutes earlier

than the Chennai mail

= 9:30 a.m. - 3 hours 45 minutes

5 : 45 a.m.

Thus, the Howrah mail reached Mumbai at 5:45 am.

4. Starting time of dance programme = 1415 hours

Ending time of dance programme = 3 hours 45 minutes after

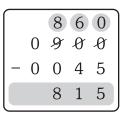
1415 hours

Time will it end = 1415 hours + 0345 hours

= 1800 hours.

Hence, the dance programme will end at 1800 hours.

7 9 0 1 8 3 0 - 0 2 4 5 1 5 4 5



8 9 0 0 9 3 8 - 0 3 4 5 5 4 5

1 4 1 4 + 0 3 4 5 1 8 0 0

A. Which of the following are leap years.

1. **1994**

- \therefore 1994 is not exactly divisible by 4. So, 1994 is not a leap year.
- 3. **2002**

	5	0	0	
$ 4\rangle$	2	0	0	2
_	2	0	0	0
				2

- \therefore 2002 is not exactly divisible by 4. So, 2002 is not a leap year.
- 5. **2010**

$$\begin{array}{r|rrrr}
5 & 0 & 2 \\
4 & 2 & 0 & 1 & 0 \\
-2 & 0 & & & \\
\hline
& 0 & 1 & 0 \\
-0 & 0 & 8 & & \\
\hline
& 2 & & & \\
\end{array}$$

- \therefore 2010 is not exactly divisible by 4. So, 2010 is not a leap year.
- 7. **2016**

2. **1952**

	4	8	8	
$ 4\rangle$	1	9	5	2
_	1	6		
		3	5	
_	_	3	2	
			3	2
_		_	3	2
			0	0

- \therefore 1952 is exactly divisible by 4. So, 1952 is a leap year.
- 4. **2004**

		5	0	1	`
4	2	0	0	4	
_	2	0			
-		0	0	4	
	_	0	0	4	
-				0	
					١.

- : 2004 is exactly divisible by 4. So, 2004 is a leap year.
- 6. **2012**

	5	0	3	
4	2	0	1	2
_	- 2	0		
		0	1	2
		_	1	2
			0	0

- \therefore 2012 is exactly divisible by 4. So, 2012 is a leap year.
- 8. **2028**

	5	0	7		_
4)	2	0	2	8	
_	2	0			
_		0	2	8	
	_		2	8	
				0	-

 \therefore 2016 is exactly divisible by 4.

So, 2016 is a leap year.

 \because 2028 is exactly divisible by 4.

So, 2028 is a leap year.

B. Solve.

1. Number of days in May = 31 - 10 = 21 days

Number of days in June = 30 days Number of days in July = 11 days

 \therefore Total number of days = (21 + 30 + 11) days = 62 days

Hence, George was leave for 62 days.

2. Number of days in October = (31-19) = 12 days

Number of days in November = 4 days

 \therefore Total number of days = (12 + 4) days = 16 days

Hence, Ahmad stayed 16 days in Shimla.

3. Number of days in April = (30-25) = 5 days

Number of days in May = 31 days Number of days in June = 16 days

 \therefore Total number of days = (5 + 31 + 16) days = 52 days.

4. Number of days in September = (30-5) days = 25 days

Number of days in October = 4 days

 \therefore Total Number of days = (25 + 4) days = 29 days

Hence, the world book fair lasts in 29 days.

Tricky Maths

A. Fill in the blanks.

- 1. Quarter past one is the same as 1:15.
- 2. There are **24** hours in a day.
- 3. There are **60** minutes in an hour.
- 4. The hour hand goes round the clock 2 times in a day.
- 5. There are **35** minutes from 8.45 p.m. to 9.20 p.m..
- 6. The time 30 minutes before 12.30 p.m. is **12**: **00 noon**.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c) 2. (a) 3. (c) 4. (c) 5. (c)

NEP Life Skills

In which month was the butter packed? **January**

Which month will be 180 days from 7/01/11? **July**

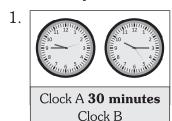
Will it be safe to eat the butter in June 2011? Yes/No

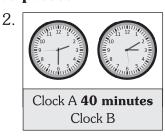
May (months) 2011 (year)

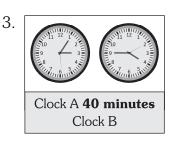
CAn you use it in October 2012? Yes/No ✓

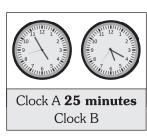
Worksheet

A. Clock A shows the starting time of an activity and Clock B shows the finishing time. How many minutes have passed?









B. Draw the hands of the clock to show the time given in the box.

2.



10:50



11 : 40



5 : 05



1:20

Chapter 13

Roll Back

A. Write as paise (p).

Money

4.

4.

B. Write as rupees (₹).

C. How much money?

L∈t's Do≣

Solve the following:

1. ₹ P 1 6 3 . 5 0 + 4 5 . 7 5 1 0 9 . 2 5 7. P
 6 7 . 7 5
 3 4 . 0 0
 3 3 . 7 5

₹ P
9 9 . 7 5
- 7 3 . 2 5
2 6 . 5 0

4.

3.

6.

Exercise 13.1

A. Add or Subtract.

 1 1 1 1 1 ₹ 9 8 1 . 1 1 1 ₹ 1 2 1 . 2 3 + ₹ 5 2 1 . 5 9 ₹ 1 6 2 3 . 9 3

 1 1 ₹ 2 0 5 . 4 5 ₹ 1 4 5 . 3 0 + ₹ 2 2 0 . 7 0 ₹ 5 7 1 . 4 5

7. 4 14 ₹ 5 4 7 . 9 1 - ₹ 3 9 1 . 2 1 ₹ 1 5 6 . 7 0 ₹ 4 9 8 . 7 0 - ₹ 2 1 1 . 2 0 ₹ 2 8 7 . 5 0

B. Solve:

1. Cost of a ball = ₹25.50 Cost of a book = ₹6.75 Cost of a bag = ₹135.95 2. Cost of a pant = ₹110.00 Cost of a shirt = ₹90.00

∴ Total cost of all things is ₹168.20.

1 2 1 ₹ 2 5 . 5 0 ₹ 0 6 . 7 5 + ₹ 1 3 5 . 9 5 ₹ 1 6 8 . 2 0

8

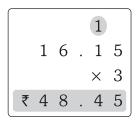
₹ 1 1 0 . 0 0 - ₹ 9 0 . 0 0 ₹ 2 0 . 0 0

∴ The difference is ₹20 in their cost.

Exercise 13.2

A. Solve the following word problems.

- Price of 1 toy ₹16.15
 - ∴ Price of 3 toys ₹16.15 × 3
 - ₹48.45



Hence, Mridula paid ₹48.45 for 3 toys.

- 3. Cost of 1 postal stamps ₹0.75
 - ₹0.75 × 50 .. Cost of 50 postal stamps
 - ₹37.50

2.	Cost of 1 kg of rice $=$	₹13.50
	∴ Cost of 35 kg of rice =	₹13.50 × 35
	=	₹ 472.50
	So, the cost of 35 kg of ric	ce is ₹472.50



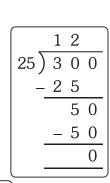
₹	1	3		5	0
			×	3	5
	6	7		5	0
4	0	5		0	0
4	7	2		5	0

Solve the following world problems.

- Total Amount distributed ₹105 Number of children 3
 - .. Money received by 1 child ₹105 ÷ 3 ₹35

Hence, each child gets ₹35.

- 2. Cost of 25 packets of milk
 - .. Cost of 1 packet of milk Hence, the cost of 1 packet of milk is
- ₹300 ₹300 ÷ 25 = ₹12 ₹12.



- 3. Total Amount had Mr Arun ₹1250 ₹250 Amount gave by Arun to his friends $(1250 \div 250) = 4$.. Number of Friends get the money =
 - Hence, 5 friends received the money by Mr Arun.

5			
1	2	5	0
1	2	5	0
			0
	1	1 2	5 1 2 5 1 2 5

1 5

Exercise 13.3

A. Read the bills to find the total amount and the money left over.

Money paid = ₹100

S. No.	Item	Quantity	Cost (₹)	
1.	Comb	1	12.75	
2.	Ribbon	2 m	6.50	
3.	Clips	6	25.60	
4.	Hair pins	2	22.10	
		Total =	₹ 66.95	

∴ Money left over =
$$₹(100 - 66.95) = ₹33.05$$

2. Money paid = ₹1000

S. No.	Item	Quantity	Cost (₹)	
1.	T-shirt	1	237.75	
2.	Floaters	1 pair	299.99	
		Total =	₹537.74	

∴ Money left over =
$$₹(1000 - 537.74) = ₹462.26$$

3. Money paid = ₹100 + ₹100 = ₹**200**

S. No.	Item	Quantity	Cost (₹)		
1.	Potatoes	$\frac{1}{2}$ kg	7.50		
2.	Carrots	1 kg	16.00		
3.	Apples	1 kg	120.00		
4.	Cherry	$\frac{1}{4}$ kg	24.00		
	Total = ₹167.50				

∴ Money left over =
$$₹(200 - 167.50) = ₹32.50$$

B. Solve.

Deepak have money = ₹ 139
Cost of a book whose purchased by Deepak = ₹ 197.75
He need more money = ₹ (197.75 – 139)
= ₹ 58.75

8 17 ₹ 1 9 7 . 7 5 - ₹ 1 3 9 . 0 0 ₹ 0 5 8 . 7 5

Hence, Deepak needs ₹ 58.75 to buy the book.

2. Rahul have money = ₹300Money spent for rides = ₹45Money spent on Games = ₹137Money spent on Food = ₹92.50∴ Total money spent by Rahul = ₹(45 + 137)

1 1 ₹ 4 5 . 0 0 ₹ 1 3 7 . 0 0 + ₹ 9 2 . 5 0 ₹ 2 7 4 . 5 0

2 9 9 10 ₹ 3 0 0 . 0 0 + ₹ 2 7 4 . 5 0 ₹ 0 2 5 . 5 0

= ₹ 274.50Money left with Rahul = ₹ (300 - 274.50) = ₹ 25.50

Hence, ₹ 25.50 is left with Rahul.

3. Cost of 1 kg of sweet = ₹240

∴ Cost of
$$2\frac{1}{2}$$
 kg of sweets $=$ ₹240 × 2 $\frac{1}{2}$ $=$ ₹240 × 2 + 240 × $\frac{1}{2}$

+92.50)

= ₹480 + 120 = ₹600

Hence, the cost of $2\frac{1}{2}$ kg of sweet is ₹650.

6) 1 0 0 - 6 - 4 0 - 3 6 - 4

1 6

4. Cost of 1 pencil = ₹6

Number of pencils bought for ₹100 = ₹(100 ÷ 6)

∴ Q = 16, R = 4

Hence, 16 pencils can be bought with ₹100 and ₹4 will be left over.

5. Apples bought by Reema = ₹22.75
Shop keeper return money to her = ₹27.25
∴ She give money to the shop keeper = ₹(22.75 + 27.25) = ₹50.00
Hence, Reema gave ₹50 note to the shopkeeper.

1 1 1 2 2 . 7 5 + 2 7 . 2 5 5 0 . 0 0

Tricky Maths

Say True (T) or False (F). Correct the False statements.

- 1. False (2 notes of ₹500 = ₹ 1000)
- 2. True
- 3. False (The cost of 1 pen = $₹60 \div 12 = ₹5$)

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (b)

2. (d)

3. (a)

4. (b)

NEP SDGs for Qualitative Education

Do it yourself.

Worksheet

Answer the following questions.

- 1. Motor boat completes a trip in less than half an hour.
- 2. Boat with oars take most time but costs the least.
- **3.** Paddle boat makes two trips in an hour.
- **4.** $300 \div 15 = 20$ children went in the boat with oars.
- **5.** Ticket price of Motor boat = ₹ 25
 - Ticket price of Shikara = ₹30
 - ∴ Manoj pay for both = ₹(25 + 30) = ₹55
 - Spending time for boating = 20 min + 45 min = 65 min = 1 hours 5 min
- **6.** Saraansh take Motor boat and Paddle boat.

Chapter 14

Data Handling

Roll Back

A. The number of people visiting a zoo on five days of the week is shown in the following pictograph.

Answer the questions that follow.

1. Wednesday

- 2. Monday
- 3. Total number of people = $30 \times 20 = 600$
- B. The bar graph below shows the number of books read by students during the summer vacations.
 - 1. Vertical scale shows the number of books read by students.
 - 2. Shalu read the most number of books.
 - 3. Charu and Raman read the same number of books.

Exercise 14.1

- A. A survey was conducted among a group of students about the subject they like most. Read the pictograph and answer the questions that follow.
 - 1. English liked by the most number of students.
 - 2. Number of students who like Maths $= 6 \times 5 = 30$ students.
 - 3. Number of students who like English = $10 \times 5 = 50$ students.
 - 4. Total number of students $= 26 \times 5 = 130$ students.

B. The following pictograph shows the number of books sold by a shop from Monday to Saturday.

Read the pictograph and answer the following questions.

- 1. The minimum number of books sold in Tuesday.
- 2. Number of books sold in Wednesday $= 8 \times 5 = 40$

Number of books sold in Tuesday = $2 \times 5 = 10$

- \therefore Difference = 40 10 = 30 books
- 3. No of books sold in Saturday $= 10 \times 5 = 50$
- 4. Total number of books sold in 6 days $= 34 \times 5 = 170$
- C. The following information is about the different kind of programmes that children watch on television these days.
 - 1. Most popular programme are cartoons.
- 2. Sports are more popular than movies

3. 25 children watch the news.

Exercise 14.2

- A. The bar graph given below shows the number of cars old during the first half of 2012. Read the bar graph and answer the following questions.
 - 1. The bar graph shows the number of cars sold during the first half of 2012.
 - 2. Number of cars sold in January = 150
 - 3. Number of cars sold in March = 200 and May = 100
 - \therefore Difference = 200 100 = 100; 100 cars were more sold in March than in May
 - 4. Total = Number of cars sold in 6 months = (150 + 250 + 200 + 150 + 100 + 250) = 1100 cars
- B. The bar graph given below shows the favourite breakfast of students of class IV. Read the bar graph and answer the questions that follow.
 - 1. Paratha is the most popular breakfast food.
 - 2. Sandwich is the least popular breakfast food.
 - 3. 20 students like toast and butter.
 - 4. Total Number of students = 20 + 30 + 25 + 15 + 25 = 115

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (a)

3. (b)

4. (d)

NEP Computational and Analytical Thinking

Drawing a bar graph.

1

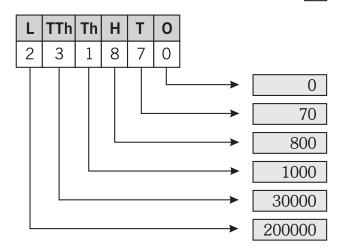
Large Numbers

Roll Back

A. Write the population in words.

Two lakh thirty one thousand eight hundred seventy.

B. Write the place value of each digit in .



C. Use the digits 5, 6, 3, 8, 9, 1 to:

- 1. Greatest possible number = 986531
- 2. Smallest possible number = 135689

L∈t's Do≡

A. Rewrite the following numbers using commas. Also write the numbers in words.

1. 11,78,945

Eleven lakh seventyeight thousand nine

hundred forty-five

2. 44,90,751

Forty-four lakh ninety

thousand seven hundred fifty-one.

3. 9,47,45,101 : Nine crore forty-seven lakh forty-five thousand one hundred one.

4. 55,55,55,55 : Fifty-five crore fifty-five lakh fifty-five thousand five hundred fifty-five.

5. 7,00,00,000 : Seven crore

6. 7,29,45,007 : Seven crore twenty-nine lakh forty-five thousands seven.

B. Write the number name:

1. Fifty-nine lakh forty thousand sixty-one

2. One crore

3. Sixty-three lakh nine hundred

4. Nine crore.

Exercise 1.1

A. Write the number in words:

3240240 : Thirty-two lakh forty thousand two hundred forty.
 7972046 : Seventy-nine lakh seventy-two thousand forty-six.
 63592004 : Six crore thirty-five lakh ninety-two thousand four.

4. **98700024** : Nine crore eighty-seven lakh twenty-four.

5. **811000243** : Eighty-one crore ten lakh two hundred forty-three.

6. **30005000** : Three crore five thousand.

7. **1499999** : Fourteen lakh ninety-nine thousand nine hundred ninety-nine. 8. **203040560** : Twenty crore thirty lakh forty thousand five hundred sixty.

B. Write the number name in figure.

1. 24,32,019 2. 70,81,405

3. 9,00,22,608

4. 6,42,09,016 5. 86,75,00,692

6. 30,00,72,007

C. Write the following numbers in the palace value chart.

Period	Carores		Lakhs		Thousands		Ones		
Place value	TL	С	TL	L	TTh	Th	Н	Т	0
1. Six crore six thousand		6	0	0	0	6	0	0	0
2. 7,34,50,007		7	3	4	5	0	0	0	7
3. One crore four Lakh fifty- eight thousand two		1	0	4	5	8	0	0	2
4. Eighteen lakh six hundred			1	8	0	0	6	0	0

Let's Do≣

1. 23,65,358 Twenty-three lakh sixty-five thousand three hundred fifty-eight; 2,365,358 Two million three hundred sixty-five thousand three hundred fifty-eight 2. 3,42,82,627 Three crore forty-two lakh eighty-two thousand six hundred twenty-seven; 34,282,627 Thirty-four million two hundred eighty-two thousand six hundred twenty-seven.

3.

8,70,13,569 Eight crore seventy lakh thirteen thousand five hundred sixty-nine; 87,013,569 Eighty-seven million thirteen thousand five hundred sixty-nine

4. 9,01,50,028 Nine crore one lakh fifty thousand twenty-eight;

90,150,028 Ninety million one hundred fifty thousand twenty-eight

5. 8,15,52,101 Eight crore fifteen lakh fifty-two thousand one hundred one;

81,552,101 Eighty-one million five hundred fifty-two thousand one hundred one.

6. 9,91,60,001 Nine crore ninety-one lakh sixty thousand one;

99,160,001 Ninety-nine million one hundred sixty thousand one.

Exercise 1.2

Write each of the following numbers in words using International place value system.

1. 2,896,450 : Two million eight hundred ninety-six thousand four hundred fifty.

2. 5,300,649 : Five million three hundred thousand six hundred forty-nine.

3. : Forty million five hundred thousand one hundred seventy-nine. 40,500,179

4. 98,256,188 : Ninety-eight million two hundred fifty-six thousand one hundred eighty-eight.

5. 123,453,536: One hundred twenty-three million four hundred fifty-three thousand five

hundred thirty-six.

6. 256,545,198: Two hundred fifty-six million five hundred forty-five thousand one hundred ninety-eight.

: Three million eight hundred fifty-six thousand nine hundred eighty-nine.

534,938,125: Five hundred thirty-four million nine hundred thirty-eight thousand one hundred twenty-five.

Write the following in figures.

3,856,989

7.

1. 2,743,149 2. 7,547,505

56,054,532 3.

4. 22,240,783 5. 105,004,999

C. Rewrite these numbers in the International system.

19,23,43,560 write in the International system

812,415 8,12,415 write in the International system 2. 15.03.469 write in the International system = 1.503.469 3. 73,47,149 write in the International system 7,347,149 = 4. 85,73,111 write in the International system 8,573,111 = 11,12,23,345 write in the International system 5. = 111,223,345

D. Fill in the blanks.

6.

1. 1 million = 10 lakhs.
 2. 100 lakhs = 10 millions
 3. 10 millions = 1 crore
 4. 10 crores = 100 millions

Exercise 1.3

=

192,343,560

A. Find the place value of :

1.5 in 8,35,182Place value of $5 = 5 \times 1000 = 5000$ 2.6 in 36,48,37,111Place value of $6 = 6 \times 10000000 = 60000000$ 3.8 in 6,82,32,175Place value of $8 = 8 \times 1000000 = 8000000$ 4.0 in 2,05,35,317Place value of 0 = 05.5 in 7,06,25,320Place value of $5 = 5 \times 1000 = 5000$

B. Write the expanded form of the following numbers:

The expanded form of 75,56,063 70,00,000 + 5,00,000 + 50,000 + 6,000 + 0 +60 + 32. The expanded form of 12,35,17,989 10.00.00.000 + 2.00.00.000 + 30.00.000 +5,00,000 + 10,000 + 7,000 + 900 + 80 + 93. 30,00,000 + 5,00,000 + 80,000 + 2,000 + 100The expanded form of 35,82,189 +80 + 980,00,000 + 1,00,000 + 10,000 + 2,000 + 6004. The expanded form of 81,12,633 6,00,00,000 + 70,00,000 + 8,00,000 + 40,0005. The expanded form of 6,78,45,631 +5,000+600+30+120.00.00.000 + 8.00.00.000 + 30.00.000 +6. The expanded form of 28,35,17,893

C. Write the following numbers in short form.

1. 87,53,044 2. 69,15,465 3. 8,76,54,321 4. 10,40,20,707 5. 7,80,40,203 6. 10,20,30,405

D. Find.

- 1. Place value of the first 9 in the number 19,29,029 = 9
 Place value of the second 9 in the number 19,29,029 = 9000
 Place value of the third 9 in the number 19,29,029 = 900000
 So, the sum of the place values of the three 9s in the number 19,29,029 = 9,09,000 = 9,09,000
- 2. Place value of the first 6 in the number 25,63,62,127 = 60,000 = 60,00,000 So, the Difference of the place values of the two 6s in the number 25,63,62,127 = 60,00,000 = 60,00,000 60,000 = 59,40,000

5,00,000 + 10,000 + 7,000 + 800 + 90 + 3

3. Place value of 7 in the number 33,75,103 70,000 7 Face value of 7 in the number 33,75,103 So the product of the place value and face value

in the number 33,75,103 $70000 \times 7 = 490000$

E. Find the predecessor and successor of the following.

Predecessor of 40,95,491 40,95,491 - 140,95,490 =Successor of 40,95,491 = 40,95,491+1= 40,95,492 2. Predecessor of 70,00,000 70.00.000 - 169,99,999 =Successor of 70,00,000 =70,00,000 + 1=70,00,001 3. Predecessor of 9,14,07,490 9,14,07,490 - 19,14,07,489 = Successor of 9,14,07,490 9.14.07.490 + 1==9,14,07,491 4. Predecessor of 73,73,377 73,73,777 - 173,73,776 ==Successor of 73,73,377 73,73,777 + 173,73,378 = =5. Predecessor of 1,10,01,100 1,10,01,100-11,10,01,099 = Successor of 1,10,01,100 1,10,01,100+11,10,01,101 ====

Predecessor of 4,00,00,000 4,00,00,000 - 13,99,99,999 4,00,00,001

Successor of 4,00,00,000 4,00,00,000 + 1= =

Exercise 1.4

A. Compare each pair of numbers. Put >, < or = in the.

1 6,75,412 > 6,57,412 35,621,312 < 35,621,413

3. 8,756,215 < 8,756,319

9.99.899 < 9.99.998 4.

Arrange the following numbers in ascending order:

Ascending order is from smallest to biggest number.

- 1. 3854798 < 38547986 < 385479850 < 385479860
- 2. 18653496 < 99999999 < 338534896 < 438534896
- 3. 634398 < 6664398 < 43986666 < 66664398
- 4. 5896348 < 5896349 < 6896348 < 6896349

C. Arrange following numbers in descending order:

Descending order is from biggest to smallest number:

- 1. 345678912 > 345678901 > 234567891 > 123456789.
- 2. 578342100 > 478342100 > 57834210 > 5783421.
- 3. 78943025 > 78940325 > 78904325 > 78094325
- 921467352 > 289453207 > 86345943 > 73546265 4.

Exercise 1.5

Write the smallest and greatest 6-digit numbers (without out repeating a digit)

Greatest 6-digit numbers using 7, 1, 0, 5, 4, 3 1. Arranging the digits in descending order we get 7, 5, 4, 3, 1, 0 So, the greatest number is 7,54,310. Smallest 6-digit numbers using 7, 1, 0, 5, 4, 3

MATHEMATICS-5 278 Arranging the digits in ascending order we get 0, 1, 3, 4, 5, 7

Here smallest digit is 0.

So, the smallest 6-digit number is 1,03,457.

2. Greatest 6-digit numbers using 9, 5, 2, 8, 3, 4

Arranging the digits in descending order we get 9, 8, 5, 4, 3, 2

So, the greatest number is 9,85,432.

Smallest 6-digit numbers using 9, 5, 2, 8, 3, 4

Arranging the digits in ascending order we get 2, 3, 4, 5, 8, 9

So, the smallest 6-digit number is 2,34,589.

B. Write the greatest and smallest 7 digit numbers (you may repeat a digit) using the following digits:

1. Greatest 7-digit numbers using 5, 9, 8, 4, 3, 0

Arranging the digits in descending order we get 9, 8, 5, 4, 3, 0

Here greatest digit is 9.

So, we shall repeat it to make the greatest number.

The greatest 7-digit number is 99,85,430.

Smallest 7-digit number using 5, 9, 8, 4, 3, 0

Arranging the digits in ascending order we get 0, 3, 4, 5, 8, 9

Here smallest digit is 0.

So, we shall repeat it to make the smallest number.

The smallest 7-digit number is 30, 04, 589.

2. Greatest 7-digit numbers using 2, 3, 8, 6, 7, 1

Arranging the digits in descending order we get 8, 7, 6, 3, 2, 1

Here greatest digit is 8.

So, we shall repeat it to make the greatest number.

The greatest 7-digit number is 88,76,321.

Smallest 7-digit number using 2, 3, 8, 6, 7, 1

Arranging the digits in ascending order we get 1, 2, 3, 6, 7, 8

Here smallest digit is 1.

So, we shall repeat it to make the smallest number.

The smallest 7-digit number is 11,23,678.

C. Round these numbers to the nearest ten.

1. 1346 is rounded to the nearest ten = 1350

2. 2388 is rounded to the nearest ten = 2390

3. 11003 is rounded to the nearest ten = 11000

D. Round these number to the nearest hundred.

1. 649 is rounded to the nearest hundred = 600

2. 75325 is rounded to the nearest hundred = 75300

3. 86950 is rounded to the nearest hundred = 87000

E. Round these numbers to the nearest thousand.

1. **2364** = Digit in the hundreds place is 3.

Since 3 < 5, the number is closer to 2000 than 3000.

Thus the number is rounded to nearest thousand = 2000.

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2. 99846 Digit in the hundreds place is 8. Since 8 > 5, the number is closer to 1,00,000 than 99,000 Thus the number is rounded to nearest thousand = 1,00,000. 3. 86950 Digit in the hundreds place is 9. Since 9 > 5, the number is closer to 87,000 than 86,000 Thus the number is rounded to nearest thousand = 87,000. Round the numbers to the nearest ten thousand. 43.150 Digit in the thousands place is 3. Since 3 < 5, the number is closer to 40,000 than 50,000. Thus the number is rounded to nearest ten-thousand = 40,000. 2. 53,109 Digit in the thousands place is 3. =Since 3 < 5, the number is closer to 50,000 than 60,000. Thus the number is rounded to nearest ten-thousand = 50,000. 3. 60,349 Digit in the thousands place is 0. =Since 0 < 5, the number is closer to 60,000 than 70,000 Thus the number is rounded to nearest ten-thousand=70,000. 4. 79,432 Digit in the thousands place is 9. = Since 9 > 5, the number is closer to 80,000 than 60,000. Thus the number is rounded to 80,000. 5. 85000 Digit in the thousands place is 5. = Since 5 = 5, the number is closer to 90,000 than 80,000. Thus the number is rounded to nearest ten-thousand = 90,000. Round the numbers to the nearest lakh. 1. 1,56,932 Digit in the ten-thouands place is 5. Since 5 = 5, the number is closer to 2,00,000 than 1,00,000 Thus the number is rounded to the nearest lakh is 2,00,000. 2. 2,09,321 Digit in the ten thousands place is 0. Since 0 < 5, the number is closer to 200000 than 3,00,000. Thus the number is rounded to the nearest lakh is 2,00,000. 3. Digit in the ten-thousands place is 1. 4,18,399 Since 1 < 5 the number is closer to 4,00,000 than 5,00,000. Thus the number is rounded to the nearest lakh = 4,00,000. 4. Digit in the ten-thousands place is 9. 5,93,299 Since 9 > 5, the number is closer to 6,00,000 than 5,00,000. Thus the number is rounded to the nearest lakh = 6,00,000.

Digit in the ten-thousands place is 5.

Since 5 = 5 the number is closer to 9,00,000 than 8,00,000. Thus, the number is rounded to the nearest lakh = 9,00,000.

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F.

5.

8,50,000

Exercise 1.6

A. Write the following as Roman numerals:

- 1. **95** = 90 + 5 = 100 10 + 5 = XCV
- 2. **130** = $100 + 30 = \mathbf{CXXX}$
- 3. **212** = 100 + 100 + 10 + 2 = CCXII
- 4. **163** = 100 + 60 + 3 = 100 + 50 + 10 + 3 = CLXIII
- 5. **289** = 200 + 80 + 9 = 100 + 100 + 50 + 30 + 5 + 4 = CCLXXXIX
- 6. **334** = 300 + 30 + 4 = 100 + 100 + 100 + 30 + 4 = CCCXXXIV
- 7. **467** = 400 + 60 + 7 = 500 100 + 50 + 10 + 7 =**CDLXVII**
- 8. **579** = 500 + 70 + 9 = 500 + 50 + 20 + 9 =**DLXXIX**
- 9. **1038** = 1000 + 30 + 8 = 1000 + 30 + 5 + 3 = MXXXVIII
- 10. **1256** = 1000 + 200 + 50 + 6 = 1000 + 100 + 100 + 50 + 6 = MCCLVI

B. Write the following as Hindu-Arabic numerals.

- 1. **XLIII** = XL + III = 40 + 3 = **43**
- 2. **LXIX** = L + X + IX = 50 + 10 + 9 = **69**
- 3. **CXXXV** = C + X + X + X + V = 100 + 10 + 10 + 10 + 5 =**135**
- 4. **CLXII** = C + L + X + II = 100 + 50 + 10 + 2 = **162**
- 5. **CXC** = C + XC = 100 + (100 10) = 100 + 90 = 190
- 6. **CCXXII** = C + C + X + X + II = 100 + 100 + 10 + 10 + 2 = **222**
- 7. **CCLXXXII** = C + C + L + X + X + X + II
 - = 100 + 100 + 50 + 10 + 10 + 10 + 2 =**282**
- 8. **DXIII** = D + X + III = 500 + 10 + 3 = **513**
- 9. **MDXXV** = M + D + X + X + V = 1000 + 500 + 10 + 10 + 5 =**1525**
- 10. **DCCXLII** = D + C + C + XL + II = 500 + 100 + 100 + 50 10 + 2 =**742**

C. Circle the incorrect Roman numerals:

- 1. **VVV** = VVV is incorrect because V is never repeated
- 2. **XXX** = 30 (correct)
- 3. **CCCVIII** = 308 (correct)
- 4. **DDD** = DDD is incorrect because D is never repeated.
- 5. **XXIX** = 29 (correct)
- 6. **IL** = IL is incorrect because I is subtracted only from V and X.
- 7. **VVI** = VVI is incorrect because V is never repeated.
- 8. **DDX** = DDX is incorrect because D is never repeated.

D. Compare the following Roman numerals and use >, < or =:

- 1. XLIX < LXXI 2. XC < CX 3.
- 4. DCVII > CDVII 5. CLXXV > CXLV 6. MCII > CMII



Do it yourself.

urself.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (d) 2. (b) 3. (c)

CXCIII = CXCIII

NEP Development of Traditional Knowledge

The table given below gives you the population and area of some of the states of India. Study the table and answer the questions :

Answers:

1. a. Arunachal Pradesh

b. Uttar Pradesh

2.

State	Area (sq km)	State	Area (sq km)	
Andhra Pradesh	275,069	Arunachal Pradesh	83,743	
Bihar	94,163	Gujarat	196,024	
Karnataka	191,791	Kerala	38,863	
Madhya Pradesh	308,346	Maharashtra	307,577	
Manipur	22,327	Nagaland	16,579	
Orissa	155,707	Punjab	50,362	
Rajasthan	342,239	Tamil Nadu	130,058	
Uttar Pradesh	240,928	West Bengal	88,752	

- **3.** a. Uttar Pradesh
- 4. Tamil Nadu

b. Arunachal Pradesh

Chapter

2

Addition and Subtraction

Roll Back

A. Add the following numbers.

1.
$$2,071 + 3,084 + 631 =$$
5,786

$$4927 = 14,031$$

$$+371 = 14,330$$

- 5. 65931 + 9838 = 9838 + 65,931
- 6. 48,970 + 0 = 48970

B. Write the following vertically and subtract.

- 1. 31,275 10,298
- 2. 26,713 6,960
- 3. 3,72,628 1,53,251
- 4. 6,47,885 4,59,194

	0 111615					
	3	1	2	7	5	
_	1	0	2	9	8	
	2	0	9	7	7	

C. Solve the following:

- 1. A girl wrote words = 3450Her friend wrote words = 10,087
 - \therefore Total No. of words = 3,450 + 10,087

3 4 5 0 + 1 0 0 8 7 1 3 5 3 7

- = 13,537 5 0 8 7 3 7
- 3. Vijay need money for studying abroad = ₹6,45,500 but vijay have money = ₹5,98,421 ∴ The more money
 - Vijay needs = ₹6,45,500 ₹5,98,421 = ₹47,079

5 1315 4 9 10 6 4 5 5 0 0 - 5 9 8 4 2 1 4 7 0 7 9

- 2. The city had buses = 43,219The government bought buses = 2,314
 - .. Total no. of buses in all

- 4. Lamps produced by a factory = 6,78,795
 Damaged lamps = 20,098
 - :. Remaining lamps = 6,78,795 20,098= 6,58,697

6 18 15 6 7 8 7 9 5 - 2 0 0 9 8 6 5 8 6 9 7

Let's Do

Add:

- 1. TL L TTh Th H T O 7 1 + 2 1 6 1 5 8 2 8 8
- 2. CTL L TTh Th H T O 4 3 +216 5 5
- TL L TTh Th H T O 3. 6 2 4 3

Exercise 2.1

A. Add the following:

- 1. C TL L TTh Th H
- 2. TL L TTh Th H +
- 3. TL L TTh Th H +

4. TL L TTh Th H Т 0 1 1 1 1 3 6 7 9 3 5 4 6 0 4 8 0 0 5

5. C TL LTTh Th H 1 1 1 3 6 2 4 2 0 3 8 0 7 8 8 3 3 3 2 0 8

6. C TL LTTh Th H T 1 1 1 1 5 4 7 3 6 4 9 0 0 9 7 3 7 8 4 +1 5 6 0

Find the sum of the following numbers.

Sum of 50,78,003 1. and 5,739

> 1 1 5 0 7 8 0 0 3 5 7 3 9 5 0 8 3 7 4 2

2. Sum of 18,37,003 and 5,26,308

> 1 1 1 1 8 3 7 0 0 3 + 0 5 2 6 3 0 8 2 3 6 3 3 1 1

3. Sum of 16,71,461 and 22,63,502

> 1 1 6 7 1 4 6 1 + 2 2 6 3 5 0 2 3 9 3 4 9 6 3

4. Sum of 27,60,548 and 10,81,531

> 1 1 2 7 6 0 5 4 8 1 0 8 1 5 3 1 3 8 4 2 0 7 9

5. Sum of 16,51,068; 2,34,002 and 6,317

> 1 1 1651068 2 3 4 0 0 2 6 3 1 7 1 8 9 1 3 8 7

6. Sum of 4,83,275; 13,54,036 and 65,838

> 2 1 1 1 1 4 8 3 2 7 5 1 3 5 4 0 3 6 6 5 8 3 8 1 9 0 3 1 4 9

Exercise 2.2

Solve these story sum:

Number of votes of candidate B = 43.45.400Number of votes of candidate A = 2,36,465 more than candidate B = 43,45,400 + 2,36,465Candidate B = 45.81.865

Hence, Candidate A got 45,81,865 votes.

2. Number of boys appeared for examination = 27,51,650Number of girls appeared for examination = 18,42,725= 27,51,650 + 18,42,725 | + 1 8 4 2 7 2 5Total number of students = 45,94,375

Hence, 45,94,375 students appeared for examination.

3. Cost of house ₹34,25,600 Cost of computer = ₹46,450

> .. Mr. tomar spend = ₹(34,25,600 + 46,450)

₹34,72,050

= ₹34,72,050 in all. Hence, Mr. Tomar Spend

- 1 4 3 4 5 4 0 0 2 3 6 4 6 5 4 5 8 1 8 6 5
- 1 1 2 7 5 1 6 5 0 4 5 9 4 3 7 5
- 1 1 3 4 2 5 6 0 0 4 6 4 5 0 3 4 7 2 0 5 0

Number of bulbs production in 2011 = 68,46,325

Number of bulbs production in 2012 = 4,25,600 more than in 2011.

= 68,46,325 + 4,25,600

= 72,71,925

72,71,925 bulbs production in 2012.

5. Difference of two numbers 24,50,172 Smaller number 15,28,978

> ∴Bigger number 24,50,172 + 15,28,978

> > 39,79,150

Hence, the bigger number is 39,79,150.



1

6 8 4 6 3 2 5

+ 4 2 5 6 0 0

7 2 7 1 9 2 5

1

Let's Do≡

Subtract:

1. 5 13 8 9 15 3 17 6398547 - 2 7 6 3 9 0 8 3 6 2 6 6 3 9 2.

6 1410 8 1216 8758938 - 3 6 8 7 8 9 9 5 0 6 3 0 3 7

3.

7 9 9 9 9 9 9 10 80000000 - 2 7 6 9 5 4 3 2 5 2 3 0 4 5 6 8

Exercise 2.3

A. Add the following:

TL L TTh Th H T O 3 13 11 8 12 8 644192 4 1 8 3 2

TL L TTh Th H T O 5 12 5 11 9 14 8282847 2 5 0 7 8 6 3 5

C TL LTTh Th H T O 6 12 12 4 12 73252918 2 9 4 3 5 8 4 3 8 1 7

5.

C TL LTTh Th H T O 6 10 4 15 12 10 27858387 1 6 0 7 8 2 4 2 5 4 4 8 4 8 3 6. C TL LTTh Th H T O 7 9 12 15 0 16 1 14 80351824

4 5 7 6 0 8 1 9 3 4 5 9 0 8 0

Find the difference.

Difference between 35,63,905 and 10,78,999 1.

= 35,63,905 - 10,78,999

= 24.84.906

4 151218 9 15

3563985

- 1 0 7 8 9 9 9

2 4 8 4 9 0 6

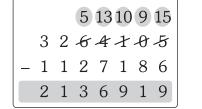
2. Difference between 32.64.105 and 11.27.186



Difference between

3.

4. Difference between 96.08.315 and 50.76.531



5575279 - 1 0 0 8 5 9 1 4 5 6 6 6 8 8

55,75,279 and 10,08,591

5 10 7 1211 9688315 - 5 0 7 6 5 3 1 4 5 3 1 7 8 4

- Difference between 5. 88,05,000 and 57,86,584
 - 7 9 14 9 9 10 8885888 - 5 7 8 6 5 8 4 3 0 1 8 4 1 6
- Difference between 6. 77,93,184 and 10,00,000

- C. Find the difference of the following numbers.
 - Difference in between 3,78,52,903 and 2,63,84,640

7 1412 8 10 37852983 - 2 6 3 8 4 6 4 0 1 1 4 6 8 2 6 3

Difference between

8,24,56,841 and

2,20,50,118

3 11 82456841 - 2 2 0 5 0 1 1 8 6 0 4 0 6 7 2 3 2. Difference in between 4,67,40,518 and 1,32,28,005

> 3 10 46748518 - 1 3 2 2 8 0 0 5 3 3 5 1 2 5 1 3

Difference between 5. 4,17,43,183 and 34,05,632

> 3 11 3 12 11 41743183 3 4 0 5 6 3 2 3 8 3 3 7 5 5 1

Difference in between 5,16,38,603 and 3,12,76,384

> 5 9 13 5 13 51638603 - 3 1 2 7 6 3 8 4 2 0 3 6 2 2 1 9

Difference between 6. 3,35,07,500 and 17,50,73,475

> 4 10 6 12 14 175073475 - 0 3 3 5 0 7 5 0 0 1 4 1 5 6 5 9 7 5

Let's Do

Subtract and check with addition.

···· > 5 3 7 7 8975 - 3598 ···· + 3598 5377 ... 8975

2.

6949256 ···· 5 9 6 1 5 7 7 - 9 8 7 6 7 9 ····· + 987679 5961577... 6949256

Exercise 2.4

A. Arrange in columns and subtract the following. Check your Answers.

1. Subtract 11,23,450 from 23,47,970.

Check:

2. Subtract 50,67,530 from 69,80,350

Check:

3. Subtract 11,00,000 from 78,39,184

Check:

4. Subtract 56,17,293 from 78,28,190

Check:

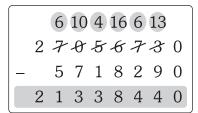
5. Subtract 1,23,82,500 from 4,67,04,815

Check:

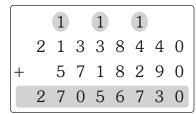
6. Subtract 5,62,18,144 from 8,24,56,184

Check:

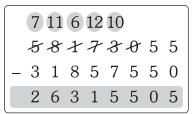
7. Subtract 57,18,290 from 2,70,56,730



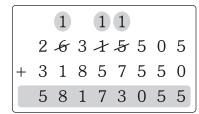
Check:



8. Subtract 3,18,57,550 from 5,81,73,055



Check:



HOTS QUESTION

Let, three consecutive numbers are (x-1), x and (x+1)

Thus, their sum = (x-1) + x + (x+1)

=x-1+x+x+1=3x

According to question, 3x = 6000

$$x = \frac{6000}{3} = 2000$$

Thus, x-1=2000-1=1999 and x+1=2000+1=20001

Hence, the required three consecutive numbers are 1999, 2000 and 2001.

Exercise 2.5

A. Solve the given problems.

1. Sum of the two numbers = 86,73,872 One of the number = 34,05,632

 \therefore Other number = 86,73,872 - 34,05,632 = 52,68,240

Hence, the other number is 52,68,240.

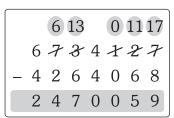
6 13 8 6 7 8 8 7 2 - 3 4 0 5 6 3 2 5 2 6 8 2 4 0

2. Total number of post cards = 67,34,127Burnt post cards = 42,64,068

:. Remaining post cards = 67,34,127 - 42,64,068

= 24,70,059

Hence, 24,70,059 post cards were left in the post office.



3. Difference of two numbers = 3,40,33,152Larger number = 8,25,55,095

 \therefore Smaller number = 8,25,55,095 - 3,40,33,152

= 4,85,21,943

Hence, the smaller number is 4,85,21,943.

4. Mrs. Mehta had money = ₹ 47,35,150 She withdrew to buy a flat = ₹ 18,87,250

And, she withdrew to buy a car = ₹ 3,45,500∴ Total money withdrew by her = ₹ 18,87,250 + ₹ 3,45,500

= ₹22,32,750

= ₹25,02,400

Hence, ₹25,02,400 is left in Mrs. Mehta's bank account.

4 7 3 5 1 5 0 - 2 2 3 2 7 5 0 2 5 0 2 4 0 0

1 8 8 7 2 5 0

2 2 3 2 7 5 0

3 4 5 5 0 0

5. Total number of students = 42,85,700Number of boys = 28,32,150

Number of girls = 42,85,700 - 28,32,150

= 14,53,550

Hence, 14,53,550 girls appeared for the examination.

3 12 6 10 4 2 8 5 7 8 0 - 2 8 3 2 1 5 0 1 4 5 3 5 5 0

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c) 2. (

2. (a)

3. (c)

4. (a)

Worksheet

Do if yourself.

Chapter

Multiplication and Division

Roll Back

A. Complete the multiplication grid.

X	23	46	215	325	414	936
5	115	230	1075	1625	2070	4680
20	460	920	4300	6500	8280	18720
14	322	644	3010	4550	5796	13104
30	690	1380	6450	9750	12420	28080

B. Complete the division grid.

÷	60	144	300	240	1200	3600
2	30	72	150	120	600	1800
3	20	48	100	80	400	1200
4	15	36	75	60	300	900
6	10	24	50	40	200	600

C. Solve the following:

1. Raja's saving in a month = ₹3825

∴ His saving in 38 months = ₹3825 × 38

= ₹1,45,350

Hence, Raja will save ₹ 1,45,350 is 38 months.

		3	8	2	5
			X	3	8
	3	0	6	0	0
1	1	4	7	5	0
1	4	5	3	5	0

- 2. Number of apples in a box = 424
 - \therefore Number of apples in 285 boxes = 424×285

= 1,20,840

3. Number of boxes = 24

Weight of 24 boxes = 4776 kg

 \therefore Weight of 1 box = $(4776 \div 24) \text{ kg}$

= 199 kg

Hence, the weight of each box is 199 kg.

			4	2	4
		×	2	8	5
		2	1	2	0
	3	3	9	2	0
	8	4	8	0	0
1	2	0	8	4	0

Exercise 3.1

A. Fill in the blanks using the multiplication facts.

1.
$$1 \times 8288 = 8288$$

2.
$$7518 \times \mathbf{0} = 0$$

3.
$$1515 \times 1 = 1515$$

4.
$$82728 \times 0 = \mathbf{0}$$

5.
$$7125 \times 2515 = 2515 \times 7125$$

6. **8175**
$$\times$$
 3570 = 3570 \times 8175

7.
$$72 \times (50 \times 8) = (72 \times 50) \times 8 = 50 \times (72 \times 8)$$

B. Multiply the following:

1. **2369**
$$\times$$
 50 = 2369 \times 5 \times 10

$$= 11,845 \times 10 = 118450$$

$$= 178 \times 8 \times 10$$

$$1424 \times 10$$

$$= 14240$$

$$= 861 \times 9 \times 100$$

$$7749 \times 100$$

$$= 774900$$

$$= 6359 \times 3 \times 1000$$

$$19077 \times 1000$$

 75774×100

 12629×600

$$= 9297 \times 5 \times 1000$$

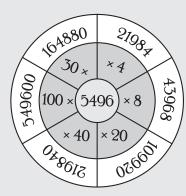
 $12629 \times 6 \times 100$

$$46485 \times 1000$$

Let's Do≣

5.

A. Complete the circles.



B. Multiply.

1.
$$4629 \times 7$$

= 32403

$$4629 \times 7$$

$$32403$$

13548

67740 81288

3	9060 × 40
	= 362400

$$9060 \times 40$$

$$362400$$

 $4. 7642 \times 401$

$$7642 \\
 \times 401 \\
 \hline
 7642 \\
 3056800 \\
 3064442$$

Tricky Maths

Fill in the blanks.

- 1. The product of a 3-digit number and a 3-digit number cannot be more than (3+3)=6 digits.
- 2. The product of a 3-digit number and a 4-digit number cannot be more than (3+4)=7 digits.

		7	6	4	2
		×	4	0	1
		7	6	4	2
0	5	6	8	0	0
0	6	4	4	4	2
			× 7 0 5 6	× 4 7 6 0 5 6 8	7 6 4 × 4 0 7 6 4 0 5 6 8 0 0 6 4 4 4

Exercise 3.2

A. Multiply.

1. 7239×37

		7	2	3	9
			X	3	7
	5	0	6	7	3
2	1	7	1	7	0
2	6	7	8	4	3

2. 5135×43

		5	1	3	5
			X	4	3
	1	5	4	0	5
2	0	5	4	0	0
2	2	0	8	0	5

3. 32138×68

_						_
		3	2	1	3	8
				×	6	8
	2	5	7	1	0	4
1	9			2	8	0
2	1	8	5	3	8	4

4. 4967×92

_						
			4	9	6	7
				X	9	2
			9	9	3	4
	4	4	7	0	3	0
	4	5	6	9	6	4

5. 19807 × 72

		1	9	8	0	7
				×	7	2
		3	9	6	1	4
1	3	8	6	4	9	0
1	4	2	6	1	0	4

6. 26854×84

		2	6	8	5	4
				X	8	4
	1	0	7	4	1	6
2	1	4	8	3	2	0
2	2	5	5	7	3	6

7. 31734×372

			3	1	7	3	4
				X	3	7	2
			6	3	4	6	8
	2	2	2	1	3	8	0
	9	5	2	0	2	0	0
1	1	8	0	5	0	4	8

8. 42135×533

			4	2	1	3	5
				×	5	3	3
		1	2	6	4	0	5
	1	2	6	4	0	5	0
2	1	0	6	7	5	0	0
2	2	4	5	7	9	5	5

9. 64912×236

			6	4	9	1	2
				X	2	3	6
		3	8	9	4	7	2
	1	9	4	7	3	6	0
1	2	9	8	2	4	0	0
1	5	3	1	9	2	3	2

10. 73609×453

			7	3	6	0	9
				X	4	5	3
		2	2	0	8	2	7
	3	6	8	0	4	5	0
2	9	4	4	3	6	0	0
3	3	3	4	4	8	7	7

11. 4225×2805

				4	2	2	5
			×	2	8	0	5
			2	1	1	2	5
	3	3	8	0	0	0	0
	8	4	5	0	0	0	0
1	1	8	5	1	1	2	5

12. 9219×5838

				9	2	1	9
			×	5	8	3	8
			7	3	7	5	2
		2	7	6	5	7	0
	7	3	7	5	2	0	0
4	6	0	9	5	0	0	0
5	3	8	2	0	5	2	2

B. Find the product of:

- $169 \times 278 \times 45$
- $(169 \times 278) \times 45$
- 46.982×45
- 21,14,190 =

_						_
				1	6	9
			×	2	7	8
			1	3	5	2
		1	1	8	3	0
		3	3	8	0	0
		4	6	9	8	2
				×	4	5
	2	3	4	9	1	0
1	8	7	9	2	8	0
2	1	1	4	1	9	0

 $438 \times 777 \times 92$ 2. $(438 \times 777) \times 92$ = $3,40,326 \times 92$ 3,13,09,992 =

$\overline{}$							
					4	3	8
				×	7	7	7
				3	0	6	6
			3	0	6	6	0
		3	0	6	6	0	0
		3	4	0	3	2	6
					×	9	2
		6	8	0	6	5	2
3	0	6	2	9	3	4	0
3	1	3	0	9	9	9	2
$\overline{}$							

- 3. 935×546×34
- $(935 \times 546) \times 34$
- $5,10,510 \times 34$
- 1,73,57,340

9 3 × 5 4 5 6 1	
5 6 1	
	0
3 7 4 (0 (
4 6 7 5 (0 (
5 1 0 5 1	0
× 3	3 4
2 0 4 2 0 4	1 0
1 5 3 1 5 3 (0 (
1 7 3 5 7 3 4	1 0

4. $860 \times 765 \times 56$ $(860 \times 765) \times 56$ $6,57,900 \times 56$ 3,68,42,400

					8	6	0
				×	7	6	5
				4	3	0	0
			5	1	6	0	0
		6	0	2	0	0	0
		6	5	7	9	0	0
					×	5	6
	3	9	4	7	4	0	0
3	2	8	9	5	0	0	0
3	6	8	4	2	4	0	0
$\overline{}$							_

C. Solve the following story sums.

Money deposits in 1 month ₹48,290 Money deposits in 24 month (2 years) ₹48,290 × 24

₹11,58,960

Hence, Mr Goel will deposits ₹11,58,960 after 2 years.

		4	8	2	9	0
				×	2	4
	1	9	3	1	6	0
	9	6	5	8	0	0
1	1	5	8	9	6	0

2. Cost of 1 chair ₹398 Number of Chairs in auditorium

Hence, Mr Kapur paid ₹6107708 to the shopkeeper.

15346 \times 3 9 8 122768 15,346 1381140 ₹(15,346 × 398) Mr Kapur Spent money 4603800 ₹6107708 6 1 0 7 7 0 8

3. Cost of a set of books ₹1459 Number of books set ordered by school 375 =

Total money school pay ₹ (1459 × ₹375)

₹ 5,47,125

Hence, the school paid ₹ 5,47,125 for books.

$$\begin{array}{c}
1 & 4 & 5 & 9 \\
\times & 3 & 7 & 5 \\
\hline
7 & 2 & 9 & 5 \\
1 & 0 & 2 & 1 & 3 & 0 \\
4 & 3 & 7 & 7 & 0 & 0 \\
5 & 4 & 7 & 1 & 2 & 5
\end{array}$$

4. Number of trees in one row = 208

Numbers of rows of trees = 1958

Numbers of altogether trees $= 1958 \times 208$

= 4,07,264

Hence, Mr. Justin's orchard's have 4,07,426 trees in all.

 $\begin{array}{c}
1 & 9 & 5 & 8 \\
\times & 2 & 0 & 8 \\
1 & 5 & 6 & 6 & 4 \\
3 & 9 & 1 & 6 & 0 & 0 \\
4 & 0 & 7 & 2 & 6 & 4
\end{array}$

5. Number of pages in a book = 236 Number of printed books = 1135

 \therefore Total number of printed pages = 236 \times 1135

= 2,67,860

Hence, there are 2,67,860 pages printed in all.

		1	1	3	5
		×	2	3	6
		6	8	1	0
	3	4	0	5	0
2	2	7	0	0	0
2	6	7	8	6	0

784

Exercise 3.3

A. Fill in the blanks.

1.
$$13450 \div 1 = 13450$$

3.
$$\mathbf{0} \div 295 = 0$$

2.
$$98765 \div 98765 = 1$$

4.
$$0 \div 63935 = \mathbf{0}$$

B. Complete the table.

Number	Q	R
1. 8164 ÷ 10	816	4
3. 18275 ÷ 100	182	75
5. 612345 ÷ 1000	612	345

Number	Q	R
2. 57987 ÷ 100	579	87
4. 723456 ÷ 1000	723	456
6. 888888 ÷ 10	88888	8

C. Find:

Dividend = Quotient \times Divisor + Remainder

Dividend = $22 \times 35 + 14$ = 770 + 14

Dividend = 784

 $Dividend = Quotient \times Divisor + Remainder$

$$3699 = 231 \times \text{Divisor} + 3 \Rightarrow 3699 - 3 = 231 \times \text{Divisor}$$

 $3696 = 231 \times \text{Divisor} \Rightarrow \text{Or, } 231 \times \text{Divisor} = 3696$

Divisor = $3696 \div 231 = 16$ \Rightarrow **Divisor** = **16**

Exercise 3.4

A. Divide and check your answer:

Quotient =
$$195$$

Remainder = 24

2. **42872** ÷ **36**

Quotient =
$$1190$$

Remainder = 32

Check:

Dividend =
$$Q \times D + R$$

 42872 = $1190 \times 36 + 32$
 42872 = $42840 + 32$

$$42872 = 42872$$

							_
		1	1	9	0		
36))	4	2	8	7	2	
_		3	6				
			6	8			
		_	3	6			
			3	2	7		
		_	3	2	4		
					3	2	
				_	0	0	
					3	2	

Check:

Dividend =
$$Q \times D + R$$

7239 = $195 \times 37 + 24$
7239 = $7215 + 24$
7239 = 7239

3. **32138** ÷ **68**

Quotient =
$$472$$
,
Remainder = 42

4. **162097** ÷ **76**

Quotient =
$$2132$$
,
Remainder = 65

$$\begin{array}{r}
2 1 3 2 \\
76) 1 6 2 0 9 7 \\
-1 5 2 \\
\hline
1 0 0 \\
-7 6 \\
\hline
2 4 9 \\
-2 2 8 \\
\hline
2 1 7 \\
-1 5 2 \\
\hline
6 5
\end{array}$$

Check:

Dividend =
$$Q \times D + R$$

 32138 = $472 \times 68 + 42$
 32138 = $32096 + 42$
 32138 = 32138

5. **25766** ÷ **115**

Check:

Dividend =
$$Q \times D + R$$

 162097 = $2132 \times 76 + 65$
 162097 = $162032 + 65$
 162097 = 162097

6. $42135 \div 533$

Quotient =
$$79$$
;
Remainder = 28

Check:

Dividend =
$$Q \times D + R$$

25766 = $224 \times 115 + 6$
25766 = $25760 + 6$
25766 = 25766

7. **53962** ÷ **215**

Quotient =
$$250$$
;
Remainder = 212

$$\begin{array}{r}
 250 \\
 215)53962 \\
 -430 \\
 \hline
 1096 \\
 -1075 \\
 \hline
 212 \\
 \hline
 -0 \\
 \hline
 212
\end{array}$$

Check:

Dividend =
$$Q \times D + R$$

 42135 = $79 \times 533 + 28$
 42135 = $42107 + 28$
 42135 = 42135

8. **73609 ÷ 453**

Check:

Dividend =
$$Q \times D + R$$

$$53962 = 250 \times 215 + 212$$

$$53962 = 53750 + 212$$

$$53962 = 53962$$

Quotient =
$$1$$
;
Remainder = 3381

Check:

Dividend =
$$Q \times D + R$$

$$73609 = 162 \times 453 + 223$$

$$73609 = 73386 + 223$$

$$73609 = 73609$$

$$Quotient = 2000;$$

Remainder
$$= 27$$

Check:

Dividend =
$$Q \times D + R$$

$$9219 = 1 \times 5838 + 3381$$

$$9219 = 5838 + 3381$$

9219 = 9219

11. **528717** ÷ **1055**

Quotient
$$= 501$$
;

Remainder = 162

$$\begin{array}{r}
501 \\
1055 \overline{\smash)528717} \\
-5275 \\
\hline
1217 \\
-1055 \\
\hline
162
\end{array}$$

Check:

Dividend =
$$Q \times D + R$$

$$130027 = 2000 \times 65 + 27$$

$$130027 = 130000 + 27$$

130027 = 130027

12. **4567890 ÷ 3135**

Quotient = 1457;

Remainder = 195

$$\begin{array}{r}
1457 \\
3135 \overline{\smash)4567890} \\
-3135 \\
14328 \\
-12540 \\
\hline
17889 \\
-15675 \\
\hline
22140 \\
-21945 \\
\hline
195
\end{array}$$

Check:

Dividend = $Q \times D + R$

 $528717 = 501 \times 1055 + 162$

528717 = 528555 + 162

528717 = 528717

13. **160945** ÷ **1234**

Quotient = 130; Remainder = 525

$$\begin{array}{r}
130 \\
1234 \overline{\smash)\ 160945} \\
-1234 \\
3754 \\
-3702 \\
\hline
525 \\
-0 \\
525
\end{array}$$

Check:

Dividend = $Q \times D + R$

 $4567890 = 1457 \times 3135 + 195$

4567890 = 4567695 + 195

4567890 = 4567890

14. **6872879 ÷ 4035**

Quotient = 1703;

Remainder = 1274

1	7	0	3			
6 (8	7	2	8	7	9
_ 4	0	3	5			
2	8	3	7	8		
- 2	8	2	4	5		
		1	3	3	7	9
	_	1	2	1	0	5
			1	2	7	4
) 6 - 4 2) 6 8 - 4 0 2 8 - 2 8) 6 8 7 - 4 0 3 2 8 3 - 2 8 2	$ \begin{array}{r} -4035 \\ \hline 2837 \\ -2824 \\ \hline 13 \\ -12 \end{array} $) 6 8 7 2 8 - 4 0 3 5 2 8 3 7 8 - 2 8 2 4 5 1 3 3 - 1 2 1) 6 8 7 2 8 7 - 4 0 3 5 2 8 3 7 8

Check:

Dividend = $Q \times D + R$

 $160945 = 130 \times 1234 + 525$

160945 = 160420 + 525

160945 = 160945

15. **828175** ÷ **438**

Quotient = 1890;

Remainder = 355

		1	8	9	0		
438)	8	2	8	1	7	5
-	_	4	3	8			
		3	9	0	1		
-	_	3	5	0	4		
				3	9	7	7
			_	3	9	4	2
					3	5	5

Check:

Dividend = $Q \times D + R$

 $6872879 = 1703 \times 4035 + 1274$

6872879 = 6871605 + 1274

6872879 = 6872879

16. **369875** ÷ **2045**

Quotient = 180

Remainder = 1775

		1	8	0			
2045	5	3	6	9	8	7	5
	_	2	0	4	5		
		1	6	5	3	7	
	_	1	6	3	6	0	
				1	7	7	5
						_	0
				1	7	7	5

Check:

Dividend = $Q \times D + R$

 $828175 = 1890 \times 438 + 355$

828175 = 827820 + 355

828175 = 828175

Check:

Dividend = $Q \times D + R$

 $369875 = 180 \times 2045 + 1775$

369875 = 368100 + 1775

369875 = 369875

B. Solve the following

1. Product of two numbers = 2,69,928

One number = 552

 \therefore Second number = 2,69,928 \div 552

= 489

296

So, the second number is 489.

$$\begin{array}{r}
489 \\
552 \overline{\smash)269928} \\
-2208 \\
\hline
4912 \\
-4416 \\
\hline
4968 \\
-4968 \\
\hline
0
\end{array}$$

MATHEMATICS-5

2. Cost of 216 cricket bats = 3,35,232

Cost of 1 cricket bats = $₹335232 \div 216$

= ₹1552

Thus, the cost of one cricket bat is ₹1552.

3. Number of dolls = 9,36,243

∵ 1 Week = 7 days

 \therefore 21 weeks = 7×21

= 147 days

Number of dolls

manufactured in 147 days = 9,36,243

.: Number of dolls

manufactured in 1 day $= 9,36,243 \div 147$

= 6369

Hence, the factory manufactured 6369 dolls in one day.

4. Number of mobile sets = 125

Cost of 125 mobile sets = ₹31,94,375

∴ Cost of one mobile set = $₹31,94,375 \div 125$

= ₹25,555

So, the cost of one mobile set is ₹25,555.

5. People can sit in a stadium = 52,650

People can sit in each row = 975

 \therefore Number of rows = 52650 \div 975

= 54

Hence, there are 54 rows of seats in the stadium.

6. Number of books packed in a cardboard box = 1526

Number of books to be pack = 6,48,550

 \therefore Required number of cardboard box = $6.48,550 \div 1526$

= 425

Hence the required number of cardboard box is 425.

	6	3	6	9		
147	9	3	6	2	4	3
-	- 8	8	2			
		5	4	2		
	_	4	4	1		
		1	0	1	4	
		_	8	8	2	
			1	3	2	3
		_	1	3	2	3
						0

5 4

975 5 2 6 5 0

4 8 7 5

3 9 0 0

- 3 9 0 0

	1552	
216	3 3 5 2 3	2
-	-216	
	1192	
-	-1080	
•	1123	
	-1080	
•	43	2
	-43	2
		0

$$\begin{array}{r}
425 \\
1526 \overline{\smash)648550} \\
-6104 \\
\hline
3815 \\
-3052 \\
\hline
7630 \\
-7630 \\
\hline
0
\end{array}$$

Life **S**kills

Mr Peter has an ice factory. The factory needs 750 litres of water every day to make ice.

- How much water would it use in 2 weeks to make ice? $750 \times 14 = 10,500$ litres.
- How much would 225 packs of ice cost if one pack costs ₹15? ₹15 × 225 = ₹3375
- How many cubes would be there in 9 packs if one pack contains 4 dosen cubes? $9 \times 4 = 36$ dozen cubes.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (d)

2. (c)

3. (a)

4. (b)

Adaptive Education

Recipe for making 1 cookie:

Recipe for making 1 cookie:		Recipe for making 4 cookies:		
Flour	75 g	Flour	300g	
Butter	100g	Butter	400g	
Sugar	30g	Sugar	120g	
Baking powder	5 g	Baking powder	20g	

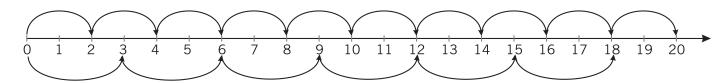
 $\frac{1}{6}$ tea spoon Vanilla essence Vanilla essence

Chapter

Multiples and Factors

Roll Back

A. Look at the multiples of 2 and 3 on the number line and fill in the blanks.

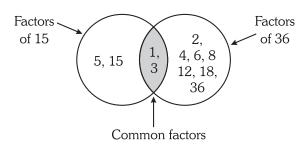


Multiples of 2: 2, 4, 6, 8, 10, 12, 14, 16, **18, 20**.

Multiples of 3:3, 6, 9, 12, 15, 18.

Common multiples of 2 and 3 : **6, 12, 18**.

- B. Write all the factors of these numbers. Write the common factors in the part shaded green:
 - 1. 15, 36

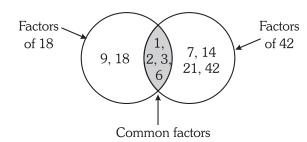


Factors of 15 = 1, 3, 5, 15

Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36

Common factors of 15 and 36 = 1, 3

2. 18, 42



Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 42 = 1, 2, 3, 6, 7, 14, 21, 42

Common factors of 18 and 42 = 1, 2, 3, 6

Tricky Maths

Write the.

1. First three multiples of 4.

$$4 \times 1 = 4$$

$$4 \times 2 = 8$$

$$4 \times 3 = 12$$

$$4 \times 4 = 16$$

The first three multiples of 4 are 4, 8, 12 and 16.

- 3. Third multiple of $10 = 10 \times 3 = 30$.
- 5. Multiple of $5 = 5 \times 1 = 5$

Odd multiples of 5 between 1 and 20 = 5, 15.

 $5 \times 3 = 15$

2. First five odd multiple of 7.

$$7 \times 1 = 7$$

$$7 \times 3 = 21$$

$$7 \times 5 = 35$$

$$7 \times 7 = 49$$

$$7 \times 9 = 63$$

The first five odd multiples of 7 are 7, 21, 35, 49 and 63.

4. First multiple of $9 = 9 \times 1 = 9$.

Let's Do≣

- A. Fill in the blanks.
 - 1. **1** is a factor of all numbers.
 - 2. 2 is a factor of all **even** number.
 - 3. The smallest factor of 14 is 1.
 - 4. 6 is a factor of 18 as 18 can be divided by 6 exactly.
 - 5. All numbers except 1 have at least **two** factors.

B. List all the factors of each of the following.

S. No.	Numbers	Factors
1.	35	1,5,7,35
2.	18	1, 2, 3, 6, 9, 18
3.	42	1, 2, 3, 6, 7, 14, 21, 42
4.	15	1,3,5
5.	65	1,5,13,65

Exercise 4.1

A. Put a tick (\checkmark) if the number is divisible and a cross (x) if it is not divisible.

	Number	Last	Di	visible	Ву
	number	Digit	2	5	10
1.	12	2	1	X	X
2.	86	6	1	Х	X
3.	95	5	Х	1	X
4.	175	5	X	1	X
5 .	990	0	1	1	1

Which of the following numbers divisible by 4?

- Divisible By Sum of Number **Digits** 3 9 12 3 / X 1. 2. 68 14 X X 3. 612 9 / / 4. 432 9 / / **5**. 999 27 / /
- B. If the number formed by last two digits of a number is divisible by 4. So, the number is also divisible by 4.
 - 1. **486** : Number formed by last two digits is 86.
 - \therefore 86 is not divisible by 4.

So, 486 is also not divisible by 4.

2. **5126** : Number formed by last two digits is 26.

 \therefore 26 is not divisible by 4.

So,5126 is also not divisible by 4.

3. **4920** : Number formed by last two digits is 20.

 \therefore 20 is divisible by 4.

So, 4920 is also divisible by 4.

4. **7773** : Number formed by last two digits is 73.

 \because 73 is not divisible by 4.

So, 7773 is also not divisible by 4.

B. Which of the following numbers are divisible by 8?

If the number formed by last three digits of a number is divisible by 8. So, the number is also divisible by 8.

1. **5912**: Number formed by last three digits is 912.

: 912 is divisible by 8.

So, 5912 is also divisible by 8.

2. **83224**: Number formed by last three digits is 224.

 \therefore 224 is divisible by 8.

So, 83224 is also divisible by 8.

3. **7732** : Number formed by last three digits is 732.

 \because 732 is not divisible by 8.

So, 7732 is also not divisible by 8.

4. **46246**: Number formed by last three digits is 246.

 \therefore 246 is not divisible by 8.

So, 46246 is also not divisible by 8.

Tricky Maths

The smallest prime number after 40 is 41.

The smallest odd composite number is 9.

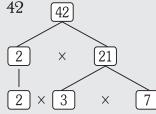
The greatest prime number before 30 is 29.

Seven consecutive composite number are 4, 6, 8, 9, 10, 12, 14.

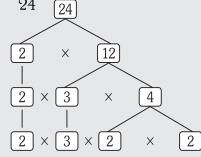
Let's Do≣

Find the prime factors using the factor tree method.

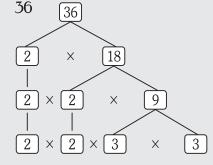
1. 4



2.



3.

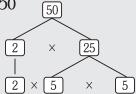


$$\therefore 42 = 2 \times 3 \times 7$$

$$\therefore 24 = 2 \times 3 \times 2 \times 2$$

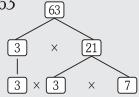
$$\therefore 36 = 2 \times 2 \times 3 \times 3$$

4. 50



$$..50 = 2 \times 5 \times 5$$

5. 63

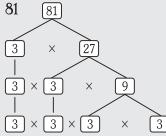


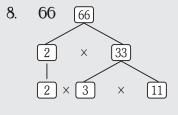
$$\therefore 63 = 3 \times 3 \times 7$$

6. 62

$$\therefore 62 = 2 \times 31$$

7.





$$\therefore 81 = 3 \times 3 \times 3 \times 3$$

$$\therefore 66 = 2 \times 3 \times 11$$

L∈t's Do≣

Find the prime factors using the division method.

1. 65

5	65
13	13
	1

2. 52

3. 91

Prime factors of 65are

5, 13.

4. 72

Prime factors of 52are

2, 2, 13.

5. 84

Prime factors of 91 are

7, 13.

6. 87

Prime factors of $72\,\mathrm{are}$

2, 2, 2, 3, 3.

7. 99

Prime factors of 84 are

2, 2, 3, 7.

8. 76

Prime factors of 87 are

3, 29.

Prime factors of 99 are

3, 3, 11.

Prime factors of 76 are

2, 2, 19.

L∈t's Do≣

Find the HCF using the prime factorization method. Check it again by the long division method.

1. 16,20

Prime factorization of 16 and 20.

2	16
2	8
2	4
2	2
	1

2	20
2	10
5	5
	1

Prime factors of $16 = 2 \times 2 \times 2 \times 2$

Prime factors of $20 = 2 \times 2 \times 5$

 \therefore Common factors = $2 \times 2 = 4$

So, $HCF ext{ of } 16 ext{ and } 20 = 4$

Check:

HCF by using division method:

The HCF of 16 and 20 is 4.

3. 35,95

Prime factorization of 35 and 95.

Prime factor of $35 = 5 \times 7$

Prime factor of $95 = 5 \times 19$

:. Common factors = 5

So, HCF of 35 and 95 = 5

Check:

HCF by using division method:

2. 48.68

Prime factorization of 48 and 68.

2	48
2	24
2	12
2	6
3	3
	1

2	68
2	34
17	17
	1
	'

Prime factor of 48 = $2 \times 2 \times 2 \times 2 \times 3$

Prime factor of $68 = 2 \times 2 \times 17$

 \therefore Common factors = $2 \times 2 = 4$

So, HCF of 48 and 68 = 4

Check:

HCF by using division method:

The HCF of 48 and 68 is 4.

4. 78,98

Prime factorization of 78 and 98.

2	78
3	39
13	13
	1

2	98
7	49
7	7
	1

Prime factor of $78 = 2 \times 3 \times 13$

Prime factor of 98 = $2 \times 7 \times 7$

∴ Common factors = 2

So, HCF of 78 and 98 = 2

Check:

HCF by using division method:

$$\begin{array}{r}
2\\35)95\\
-70\\
\hline
25)35(1\\
-25\\
\hline
10)25(2\\
-20\\
\hline
5)10(2\\
-10
\end{array}$$

The HCF of 35 and 95 is 5.

$$-\frac{1}{0}$$

5. 65,135

Prime factorization of 65 and 135.

5	65
13	13
	1

Prime factor of $65 = 5 \times 13$

Prime factor of 135 = $3 \times 3 \times 3 \times 5$

:. Common factors = 5

So, HCF of 65 and 135 = 5

Check:

HCF by using division method:

$$\begin{array}{r}
2\\
65)135\\
-130\\
\hline
5)165(33)\\
-15\\
\hline
15\\
-15\\
\hline
-15\\
0
\end{array}$$
The HCF of 65 and 135 is 5.

7. 32,128

Prime factorization of 32 and 128.

The HCF of 78 and 98 is 2.

0

6. 88,168

Prime factorization of 88 and 168

2	88
2	44
2	22
11	11
	1

2	168
2	84
2	42
3	21
7	7
	1

Prime factor of 88 = $2 \times 2 \times 2 \times 11$

Prime factor of 168 = $2 \times 2 \times 2 \times 3 \times 7$

 \therefore Common factors = $2 \times 2 \times 2 = 8$

So, HCF of 88 and 168 = 8

Check:

HCF by using division method:

$$\begin{array}{r}
1 \\
88) 1 6 8 \\
-8 8 \\
\hline
8 0) 8 8 (1 \\
-8 0 \\
\hline
8) 8 0 (10 \\
-8 0
\end{array}$$

The HCF of 88 and 168 is 8.

8. 504,576

Prime factorization of 504 and 576.

2	504
2	252
2	126
3	63
3	21
7	7
	1

2	576
2	288
2	144
2	72
2	36
2	18
3	9
3	3
	1

Prime factor of $32 = 2 \times 2 \times 2 \times 2 \times 2$

Prime factor of 128 = $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

 \therefore Common factor = $2 \times 2 \times 2 \times 2 \times 2 = 32$

So, HCF of 32 and 128 is 32.

Check:

HCF by using division method:

The HCF of 32 and 128 is 4.

Prime factor of $504 = 2 \times 2 \times 2 \times 3 \times 3 \times 7$

Prime factor of $576 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$

 \therefore Common factors = $2 \times 2 \times 2 \times 3 \times 3 = 72$

So, HCF of 504 and 576 is 72.

Check:

HCF by using division method:

The HCF of 504 and 576 is 72.

Exercise 4.2

A. Find the HCF by prime factorization method.

1. **28, 36**

2	28
2	14
7	7
	1

Prime factors of $28 = 2 \times 2 \times 7$

Prime factors of $36 = 2 \times 2 \times 3 \times 3$

 \therefore Common factors = $2 \times 2 = 4$

So, the HCF of 28 and 36 is 4.

3. **15, 30**

Prime factors of $15 = 3 \times 5$

Prime factors of $30 = 2 \times 3 \times 5$

 \therefore Common factors = $3 \times 5 = 15$

So, the HCF of 15 and 30 is 15.

2. **27, 54**

3	27
3	9
3	3
	1

2	54
3	27
3	9
3	3
	1

Prime factors of 27 = $3 \times 3 \times 3$

Prime factors of 54 = $2 \times 3 \times 3 \times 3$

 \therefore Common factors = $3 \times 3 \times 3 = 27$

So, the HCF of 27 and 54 is 27.

4. **24**, **32**, **56**

Prime factors of 24 = $2 \times 2 \times 2 \times 3$

Prime factors of 32 = $2 \times 2 \times 2 \times 2 \times 2$

Prime factors of 56 = $2 \times 2 \times 2 \times 7$

 \therefore Common factors = $2 \times 2 \times 2 = 8$

So, the HCF of 24, 32 and 56 is 8.

5. **20, 50, 90**

2	20
2	10
5	5
	1

Prime factors of
$$20 = 2 \times 2 \times 5$$

Prime factors of
$$50 = 2 \times 5 \times 5$$

Prime factors of $90 = 2 \times 3 \times 3 \times 5$
 \therefore Common factors $= 2 \times 5 = 10$
So, the HCF of 20, 50 and 90 is 10.

7. **99, 33**

3	99
3	33
11	11
	1

Prime factors of
$$99 = 3 \times 3 \times 11$$

Prime factors of $33 = 3 \times 11$
 \therefore Common factors $= 3 \times 11 = 33$
So, the HCF of 99 and 33 is 33 .

9. **45, 65, 75**

5	65
13	13
	1

Prime factors of 45 = $3 \times 3 \times 5$ Prime factors of 65 = 5×13 Prime factors of 75 = $3 \times 5 \times 5$

 \therefore Common factor = 5 So, the HCF of 45, 65 and 75 is 5.

6. **64, 74, 84**

2	64
2	32
2	16
2	8
2	4
2	2
	1

2	74	_	2	84
37	37		2	42
	1		3	2
			7	7
				1

Prime factors of
$$74 = 2 \times 37$$

Prime factors of 84 =
$$2 \times 2 \times 3 \times 7$$

$$\therefore$$
 Common factor = 2

So, the HCF of 64, 74 and 84 is 2.

8. **31, 37, 33**

7	37		3	33
	1	3	11	11
				1

Prime factors of 31 =
$$1 \times 31$$

Prime factors of 37 = 1×37

Prime factors of 33 =
$$1 \times 11 \times 33$$

$$\therefore$$
 Common factor = 1

So, the HCF of 31, 37 and 33 is 1.

10. **36, 48, 96**

2	36	
2	18	
3	9	
3	3	
	1	

2	48	
2	24	
2	12	
2	6	
3	3	
	1	

2	96
2	48
2	24
2	12
2	6
3	3
·	1

Prime factors of 36 =
$$2 \times 2 \times 3 \times 3$$

Prime factors of 48 =
$$2 \times 2 \times 2 \times 2 \times 3$$

Prime factor of 96 =
$$2 \times 2 \times 2 \times 2 \times 2$$

$$2 \times 3$$

$$\therefore$$
 Common factor = $2 \times 2 \times 3 = 12$

Find the HCF using the long division method.

1. **27, 30**
$$\frac{1}{27)30}$$

$$-27$$

$$3)27(9)$$

$$-27$$
0

3. **19, 20**
$$1$$

$$19) 20$$

$$19$$

$$1) 19 (19$$

$$-19$$

$$0$$

So, the HCF of 27 and 30 is 3.

So, the HCF of 28 and 56 is 28.

So, the HCF of 19 and 20 is 1.

So, the HCF of 15 and 45 is 15.

5. 10, 16

30, 75 $\frac{2}{30)75}$

75 is 15.

1 5) 3 0 (2
$$-\frac{3 \ 0}{0}$$
So, the HCF of 30 and

So, the HCF of 10 and 16 is 2.

7. 35, 49

35, 49
$$\begin{array}{r}
1\\
35) 4 9\\
-3 5\\
\hline
1 4) 3 5 (2\\
-2 8\\
\hline
7) 1 4 (2\\
\hline
-1 4\\
\hline
0
\end{array}$$
So, the HCF of 35 and 49 is 7.

64, 80

$$\begin{array}{r}
1 \\
64 \overline{\smash{\big)}\ 8\ 0} \\
-\underline{6\ 4} \\
1\ 6 \ 6\ 4 \ 4
\end{array}$$

60)100

So, the HCF of 64 $\frac{-64}{0}$ and 80 is 16.

9. 25, 36

and 49 is 7.

- 6 0 4 0) 6 0 (1

So, the HCF of 25 and 36 is 1.

306

So, the HCF of 60 and 100 is 20.

C. Solve these word problems.

1. HCF of 18 and 24

Prime factors of $18 = 2 \times 3 \times 3$. Prime factors of $24 = 2 \times 2 \times 2 \times 3$ Common factors $= 2 \times 3 = 6$

HCF of 18 and 24 = 6

2	18
3	9
3	3
	1

Thus, the largest number is 6, which divides 18 and 24 without remainder.

2. **HCF of 96 and 108**

Prime factors of 96 = $2 \times 2 \times 2 \times 2 \times 2 \times 3$ Prime factors of 108 = $2 \times 2 \times 3 \times 3 \times 3$ Common factors = $2 \times 2 \times 3 \times 3 \times 3$ HCF of 96 and 108 = $2 \times 2 \times 3 = 12$ Thus, the largest number is 12

Which divides 96 and 108 without remainder.

2	96
2	48
2	24
2	12
2	6
3	3
	1

2	108
2	54
3	27
3	9
3	3
	1

HOTS QUESTION

Manvi had $\stackrel{?}{\stackrel{?}{\stackrel{?}{$\sim}}}$ 5, Megha had $\stackrel{?}{\stackrel{?}{\stackrel{?}{$\sim}}}$ 8 and Monika had $\stackrel{?}{\stackrel{?}{\stackrel{?}{$\sim}}}$ 11. They went to a stationery shop and bought an equal number of crayons so that each of them was left with $\stackrel{?}{\stackrel{?}{\stackrel{?}{$\sim}}}$ 2.

- 1. What is the greatest number of crayons each of them could have bought?

 3 (HINT: Subtract 2 from each amount and find the HCF.)
- 2. Who bought the crayons costing maximum? Monika
- 3. Find the greatest number which divides 120 and 75 without a remainder. 15

Tricky Maths

What is the LCM of 2 and 5? Put a tick () in the correct (

First five multiples of 2:2,4,6,8,10

First five multiples of 5:5,10,15,20,25

- 2
- 4
- \subset
- 6
- \bigcirc
- \bigcirc
- 10



Exercise 4.3

A. Find the LCM using the prime factorization method.

1. **12, 15** : Prime factors of 12 = $2 \times 2 \times 3$

Prime factor of 15 $= 3 \times 5$

 $\therefore LCM \text{ of } 12 \text{ and } 15 \qquad = \qquad 2 \times 2 \times 3 \times 5 \qquad = \qquad \textbf{60}$

2. **18, 27** : Prime factors of 18 = $2 \times 3 \times 3$

Prime factor of 27 $= 3 \times 3 \times 3$

 $\therefore LCM \text{ of } 18 \text{ and } 27 \qquad = \qquad 2 \times 3 \times 3 \times 3 \qquad = \qquad \mathbf{54}$

3. **42, 70** : Prime factors of 42 = $2 \times 3 \times 7$

Prime factors of 70 $= 2 \times 5 \times 7$

 $\therefore LCM \text{ of } 42 \text{ and } 70 \qquad = \qquad 2 \times 3 \times 5 \times 7 \qquad = \qquad \textbf{210}$

```
4.
      40, 32
                                Prime factors of 40
                                                                          2 \times 2 \times 2 \times 5
                                Prime factors of 32
                                                                          2 \times 2 \times 2 \times 2 \times 2
                                ∴ LCM of 40 and 32
                                                                          2 \times 2 \times 2 \times 2 \times 2 \times 5
                                                                                                                      160
                                                                   =
5.
      24, 36
                                Prime factors of 24
                                                                   =
                                                                          2 \times 2 \times 2 \times 3
                                Prime factors of 36
                                                                          2 \times 2 \times 3 \times 3
                                .: LCM of 24 and 36
                                                                          2 \times 2 \times 2 \times 3 \times 3
                                                                                                                      72
                                                                   =
                                Prime factors of 12
                                                                          2 \times 2 \times 3
6.
      12, 15, 40
                                Prime factors of 15
                                                                          3 \times 5
                                Prime factors of 40
                                                                          2 \times 2 \times 2 \times 5
                                                                   =
                                                                          2 \times 2 \times 2 \times 3 \times 5
                                ∴ LCM of 12, 15, and 40
                                                                                                                      120
7.
      15, 25, 30
                                Prime factors of 15
                                                                          3 \times 5
                                Prime factors of 25
                                                                          5 \times 5
                                Prime factors of 30
                                                                          2 \times 3 \times 5
                                .: LCM of 15, 25 and 30
                                                                          3 \times 5 \times 5 \times 2
                                                                                                                      150
                                                                   =
                                Prime factors of 20
                                                                          2 \times 2 \times 5
8.
      20, 30, 50
                                                                          2 \times 3 \times 5
                                Prime factors of 30
                                Prime factors of 50
                                                                          2 \times 5 \times 5
                                                                   =
                                                                          2 \times 2 \times 3 \times 5 \times 5
                                .: LCM of 20, 30 and 50
                                                                   =
                                                                                                                      300
9.
      10, 15, 20
                                Prime factors of 10
                                                                          2 \times 5
                                                                          3 \times 5
                                Prime factors of 15
                                                                   =
                                                                          2 \times 2 \times 5
                                Prime factors of 20
                                .: LCM of 10, 15 and 20
                                                                          2 \times 2 \times 3 \times 5
                                                                                                                      60
                                                                   =
                                                                          2 \times 3 \times 5
10. 30, 45, 60
                                Prime factors of 30
                                Prime factors of 45
                                                                          3 \times 3 \times 5
                                Prime factors of 60
                                                                   =
                                                                          2 \times 2 \times 3 \times 5
                                ∴ LCM of 30, 45 and 60
                                                                          2 \times 2 \times 3 \times 3 \times 5
                                                                                                                      180
                                                                   =
                                Prime factors of 33
                                                                          3 \times 11
11. 33, 22, 11
                                Prime factors of 22
                                                                          2 \times 11
                                                                   =
                                Prime factors of 11
                                                                          1 \times 11
                                .: LCM of 33, 22 and 11
                                                                          3 \times 2 \times 1 \times 11
                                                                                                                      66
                                                                   =
12. 25, 50, 70
                                Prime factors of 25
                                                                   =
                                                                          5 \times 5
                                Prime factors of 50
                                                                          2 \times 5 \times 5
                                Prime factors of 70
                                                                          2 \times 5 \times 7
                                                                   =
                                ∴ LCM of 25, 50 and 70
                                                                          2 \times 5 \times 5 \times 7
                                                                                                                      350
```

B. Find the LCM by short division method:

1.	9, 27	2.	12 , 20
	0 0 0 0 0		0 10

3	9, 27	2	12, 20
3	3, 9	2	6, 10
3	1, 3	3	3, 5
	1, 1	5	1, 5
			1, 1

So, the LCM of 9 and
$$27 = 3 \times 3 \times 3 = 27$$

So, the LCM of 12 and
$$20 = 2 \times 2 \times 3 \times 5$$

= 60

308

3. **10, 18**

2	10, 18
3	5, 9
3	5, 3
5	5, 1
	1, 1

So, the LCM of 10 and 18 $= 2 \times 3 \times 3 \times 5 = 90$

5. **72, 32**

2	72, 32
2	36, 16
2	18, 8
2	9, 4
2	9, 2
3	9, 1
3	3, 1
-	1, 1

So, the LCM of 72 and 32 = $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$

= 288

7. **14, 16, 8**

2	14, 16, 8
2	7, 8, 4
2	7, 4, 2
2	7, 2, 1
7	7, 1, 1
	1, 1, 1

So, the LCM of 14, 16 and 8

= $2 \times 2 \times 2 \times 2 \times 7 =$ 112

9. **21, 14, 35**

So, the LCM of 21, 14 and 35

$$= 2 \times 3 \times 7 \times 5 \qquad = \qquad 210$$

4. **30, 55**

5	30, 55
2	6, 11
3	3, 11
11	1, 11
	1, 1

So, the LCM of 30 and 55

$$= 5 \times 2 \times 3 \times 11 = 330$$

6. **20, 65**

2	20, 65
2	10, 65
5	5, 65
13	1, 13
	1, 1

So, the LCM of 20 and 65

$$= 2 \times 2 \times 5 \times 13 = 260$$

8. **10, 15, 25**

2	10, 15, 25
5	5, 15, 25
3	1, 3, 5
5	1, 1, 5
	1, 1, 1

So, the LCM of 10, 15 and 25

$$= 2 \times 5 \times 3 \times 5 = 150$$

10. **11, 24, 33**

2	11, 24, 33
2	11, 12, 33
2	11, 6, 33
3	11, 3, 33
11	11, 1, 11
	1, 1, 1

So, the LCM of 11, 24 and 33

$$= 2 \times 2 \times 2 \times 3 \times 11 = 264$$

11. **16, 32, 40**

2	16, 32, 40
2	8, 16, 20
2	4, 8, 10
2	2, 4, 5
2	1, 2, 5
5	1, 1, 5
	1, 1, 1

So, the LCM of 16, 32 and 40
$$= 2 \times 2 \times 2 \times 2 \times 2 \times 5 = 160$$

12. **27, 54, 63**

3	27, 54, 63
3	9, 18, 21
3	3, 6, 7
2	1, 2, 7
7	1, 1, 7
	1, 1, 1

So, the LCM of 27, 54 and 63

$$3 \times 3 \times 3 \times 2 \times 7 = 378$$

144

C. Solve these word problems.

Children can be arranged in rows of 12, 16 or 18 in each row.

LCM of 12, 16 and 18 The least number of children $2 \times 2 \times 2 \times 2 \times 3 \times 3 =$: LCM of 12, 16 and 18

Hence, the least number of children is 144.

2. Fruit can be arranged in groups of 3, 4, 6 or 8. The number of fruits = LCM of 3, 4, 6 and 8 \therefore LCM of 3, 4, 6 and 8 = $2 \times 2 \times 2 \times 3 = 24$ Hence, the least number of fruits is 24.

2	3, 4, 6, 8
2	3, 2, 3, 4
2	3, 1, 3, 2
3	3, 1, 3, 1
	1, 1, 1, 1

2	12, 16, 18
2	6, 8, 9
2	3, 4, 9
2	3, 2, 9
3	3, 1, 9
3	1, 1, 3
	1, 1, 1

Exercise 4.4

A. Solve the following:

1. LCM of two numbers 96: HCF of two numbers 8 1st number 32 : 2nd number ?

 $:: LCM \times HCF$ 1st number × 2nd number

 96×8 32×2 nd number =

∴ 2nd number =

Hence, the other number is 24.

2. LCM of two numbers HCF of two numbers 60; 4 ?

20: 2nd number 1st number =

= 1

 \therefore LCM \times HCF 1st number × 2nd number =

 60×4 20×2 nd number =

∴ 2nd number = 1220

Hence, the other number is 12.

We know, HCF of two co-primes

3. LCM of two co-primes = 156And, one of the number = 13

 $:: HCF \times LCM = Product of two numbers$

 $\therefore 1 \times 156 = 13 \times \text{other number}$

Other number
$$= \frac{156}{13} = 12$$

Hence, the other number is 12.

$$HCF \times LCM$$
 = Product of the two numbers

$$HCF \times 192 = 3072$$

HCF =
$$\frac{3072}{192}$$
 = 16; CF of these number = 16

Hence, the HCF of the numbers is 16.

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

3. (b)

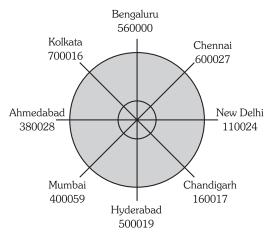
4. (a)

Worksheet

Factors and Multiples:

Answer the following:

- **Ans.** 1. Bengaluru, New Delhi, Ahmedabad, Kolkata pin code are divisible by 2.
 - 2. Ahmedabad, Mumbai, Hyderabad, Chandigarh, Chennai pin code divisible by 3.
 - 3. Bengaluru pin code is divisible by 5.
 - 4. Mumbai pin code is divisible by 9.
 - 5. Bengaluru pin code is divisible by 10.
 - 6. Ahmedabad, Mumbai, Chandigarh, pincode is divisible by 11.



Find out:

- **Ans.** 1. Pin code number is a special number allotted to every post office.
 - 2. The last 2 digits of a pincode signifies the post office to which is sent. Other numbers signify the state and the district to which the letter is sent.

NEP SDG's for Qualitative Education

Ruchi and Suchi have joined a Hip-Hop dance class. For practice, the teacher told the 30 children of the class to group themselves equally in groups of 3 or more so that no child is left out. A group of more than 10 children is not allowed. How many groups can be formed?



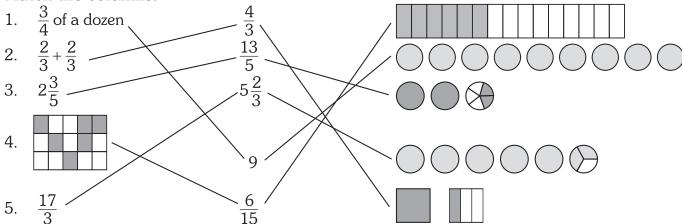
Number of Children In Each Group	Number of Groups	
3	10	
2	15	
5	6	
6	5	
10	3	

So, Required number of groups are 3 or 5 or 6 or 10 or 15.

MATHEMATICS-5

Roll Back

A. Match the columns.



B. Fill in the blanks:

- 1. Anita ate $\frac{1}{3}$ of 9 toffees. She ate **3** toffees.
- 2. A shopkeeper sold $\frac{2}{5}$ of the 30 eggs in his shop. He sold **12** eggs.
- 3. Raghav spend $\frac{1}{4}$ of ₹ 60. He spent ₹ **15**.
- 4. Sunita used $\frac{2}{3}$ of 6 onions. She used **4** onions.

C. Write the fration for the shaded parts:

1.
$$\frac{3}{8}$$

2.
$$\frac{9}{36}$$
 or $\frac{1}{4}$

3.
$$\frac{2}{3}$$

Exercise 5.1

A. Fill in the blanks:

- **1.** Fraction whose value is less than 1 is called **proper** fraction.
- 2. Fractions with the same denominator are called **like** fractions.
- **3.** If in a fraction, numerator is greater than denominator then it is an **improper** fraction.
- **4.** In fraction $\frac{5}{9}$, 5 is the **numerator** and 9 is the **denominator**.

B. Classify the following fractions as proper, improper, mixed or unit:

- 1. Proper fraction
- 2. Unit fraction

3. Proper fraction

- 4. Mixed fraction
- **5.** Improper fraction
- 6. Improper fraction

C. Convert the following improper fractions into mixed fractions.

1.
$$\frac{106}{11} = 9\frac{7}{11}$$

$$9$$

$$11)106$$

$$-99$$

$$7$$

2.
$$\frac{46}{13} = 3\frac{7}{13}$$
 $\frac{3}{13)46}$
 $\frac{3}{7}$

$$3. \quad \frac{121}{8} = 15\frac{1}{8}$$

4.
$$\frac{78}{9} = 8\frac{6}{9}$$

5.
$$\frac{18}{7} = 2\frac{4}{7}$$

$$\begin{array}{r}
 2 \\
 7)18 \\
 -14 \\
 \hline
 4
\end{array}$$

D. Convert the following mixed fractions into improper fractions:

1.
$$4\frac{1}{7} = \frac{4 \times 7 + 1}{7} = \frac{28 + 1}{7} = \frac{29}{7}$$

3.
$$6\frac{1}{9} = \frac{6 \times 9 + 1}{9} = \frac{54 + 1}{9} = \frac{55}{9}$$

5.
$$7\frac{3}{4} = \frac{7 \times 4 + 3}{4} = \frac{28 + 3}{4} = \frac{31}{4}$$

2.
$$3\frac{2}{11} = \frac{3 \times 11 + 2}{11} = \frac{33 + 2}{11} = \frac{35}{11}$$

4.
$$8\frac{1}{5} = \frac{8 \times 5 + 1}{5} = \frac{40 + 1}{5} = \frac{41}{5}$$

Exercise 5.2

A. Find an equivalent fraction of the following by multiplicatioin:

1. $\frac{5}{7}$ \Rightarrow We multiply the numerater and denominate of $\frac{5}{7}$ by 2.

$$\frac{5}{7} = \frac{5 \times 2}{7 \times 2} = \frac{10}{14}$$

So,
$$\frac{10}{14}$$
 is an equivalent fraction of $\frac{5}{7}$.

2. $\frac{6}{7}$ \Rightarrow We multiply the numerator and denominator of $\frac{6}{7}$ by 2.

$$\frac{6}{7} = \frac{6 \times 2}{7 \times 2} = \frac{12}{14}$$

So,
$$\frac{12}{14}$$
 is an equivalent fraction of $\frac{6}{7}$.

3. $\frac{1}{8}$ \Rightarrow We multiply the numerator and denominator of $\frac{1}{8}$ by 2.

$$\frac{1}{8} = \frac{1 \times 2}{8 \times 2} = \frac{2}{16}$$

So,
$$\frac{2}{16}$$
 is an equivalent fraction of $\frac{1}{8}$.

4. $\frac{5}{9}$ \Rightarrow We multiply the numerator and denominator of $\frac{5}{9}$ by 2.

$$\frac{5}{9} = \frac{5 \times 2}{9 \times 2} = \frac{10}{18}$$

So,
$$\frac{10}{18}$$
 is an equivalent fractions of $\frac{5}{9}$.

5. $\frac{6}{12}$ \Rightarrow We multiply the numerator and denominator of $\frac{6}{12}$ by 2.

$$\frac{6}{12} = \frac{6 \times 2}{12 \times 2} = \frac{12}{24}$$

So, $\frac{12}{24}$ is an equivalent fraction of $\frac{6}{12}$.

6. $\frac{4}{13}$ \Rightarrow We multiply the numerator and denominator of $\frac{4}{13}$ by 2.

$$\frac{4}{13} = \frac{4 \times 2}{13 \times 2} = \frac{8}{26}$$

So, $\frac{8}{26}$ is an equivalent fraction of $\frac{4}{13}$.

7. $\frac{5}{6}$ \Rightarrow We multiply the numerator and denominator of $\frac{5}{6}$ by 2.

$$\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

So, $\frac{10}{12}$ is an equivalent fraction of $\frac{5}{6}$.

8. $\frac{3}{8}$ \Rightarrow We multiply the numerator and denominator of $\frac{3}{8}$ by 2.

$$\frac{3}{8} = \frac{3 \times 2}{8 \times 2} = \frac{6}{16}$$

So, $\frac{6}{16}$ is an equivalent fraction of $\frac{3}{8}$.

Find an equivalent fraction of the following by division:

1. $\frac{20}{28}$ \Rightarrow Prime factorisation of 20 and 28.

$$20 = 2 \times 2 \times 5$$

$$28 = 2 \times 2 \times 7$$

HCF of 20 and 28 = 4

$$\therefore \frac{20}{28} = \frac{20 \div 4}{28 \div 4} = \frac{5}{7}$$

So, $\frac{20}{28}$ and $\frac{5}{7}$ are equivalent fractions.

3. $\frac{16}{20}$ Prime factorisation of 16 and 20

$$16 = 2 \times 2 \times 2 \times 2$$

$$20=2\times2\times5$$

 $HCF ext{ of } 16 ext{ and } 20 = 4$

$$\therefore \frac{16}{20} = \frac{16 \div 4}{20 \div 4} = \frac{4}{5}$$

So, $\frac{16}{20}$ and $\frac{4}{5}$ are equivalent fractions.

5. $\frac{8}{16}$ \Rightarrow Prime factorisation of 8 and 16

$$8 = 2 \times 2 \times 2$$

$$16 = 2 \times 2 \times 2 \times 2$$

HCF of 8 and
$$16 = 8$$

$$\therefore \frac{8}{16} = \frac{8 \div 8}{16 \div 8} = \frac{1}{2}$$

So, $\frac{8}{16}$ and $\frac{1}{2}$ are equivalent fractions.

2. $\frac{35}{40}$ \Rightarrow Prime factorisation of 35 and 40.

$$35 = 5 \times 7$$

$$40 = 2 \times 2 \times 2 \times 5$$

HCF of 35 and 40 = 5

$$\therefore \frac{35}{40} = \frac{35 \div 5}{40 \div 5} = \frac{7}{8}$$

So, $\frac{35}{40}$ and $\frac{7}{8}$ are equivalent fractions.

4. $\frac{9}{18}$ \Rightarrow Prime factorisation of 9 and 18.

$$9 = 3 \times 3$$

$$18 = 2 \times 3 \times 3$$

HCF of 9 and
$$18 = 9$$

HCF of 9 and
$$18 = 9$$

$$\therefore \frac{9}{18} = \frac{9 \div 9}{18 \div 9} = \frac{1}{2}$$

So, $\frac{9}{18}$ and $\frac{1}{2}$ are equivalent fractions.

6. $\frac{12}{20}$ \Rightarrow Prime fractorisation of 12 and 20.

$$12 = 2 \times 2 \times 3$$

$$20 = 2 \times 2 \times 5$$

$$HCF of 12 and 20 = 4$$

$$\therefore \frac{12}{20} = \frac{12 \div 4}{20 \div 4} = \frac{3}{5}$$

So, $\frac{12}{20}$ and $\frac{3}{5}$ are equivalent fractions.

7.
$$\frac{15}{20}$$
 \Rightarrow Prime factoriation of 15 and 20. 8. $\frac{8}{24}$ \Rightarrow Prime factoriation of 8 and 24.

$$15 = 3 \times 5$$

$$20 = 2 \times 2 \times 5$$

HCF of 15 and
$$20 = 5$$

$$\therefore \frac{15}{20} = \frac{15 \div 5}{20 \div 5} = \frac{3}{4}$$

So,
$$\frac{15}{20}$$
 and $\frac{3}{4}$ are equivalent fractions.

8.
$$\frac{8}{24}$$
 \Rightarrow Prime factoriation of 8 and 24

$$8 = 2 \times 2 \times 2$$

$$24 = 2 \times 2 \times 2 \times 3$$

HCF of 8 and
$$24 = 8$$

$$\therefore \frac{8}{24} = \frac{8 \div 8}{24 \div 8} = \frac{1}{3}$$

So,
$$\frac{8}{24}$$
 and $\frac{1}{3}$ are equivalent fractions.

C. Build equivalent fractions of the following fractions till the fifth place:

1.
$$\frac{3}{4}$$

We multiply the numerator and denominator of $\frac{3}{4}$ by 2, 3, 4, 5 and 6.

$$\therefore \frac{3 \times 2}{4 \times 2} = \frac{6}{8}, \frac{3 \times 3}{4 \times 3} = \frac{9}{12}, \frac{3 \times 4}{4 \times 4} = \frac{12}{16}, \frac{3 \times 5}{4 \times 5} = \frac{15}{20}, \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$$

So, $\frac{6}{8}$, $\frac{9}{12}$, $\frac{12}{16}$, $\frac{15}{20}$ and $\frac{18}{24}$ are five equivalent fractions of $\frac{3}{4}$.

2.
$$\frac{4}{5}$$

We multiply the numerator and denominator of $\frac{4}{5}$ by 2, 3, 4, 5 and 6.

$$\therefore \frac{4 \times 2}{5 \times 2} = \frac{8}{10}, \frac{4 \times 3}{5 \times 3} = \frac{12}{15}, \frac{4 \times 4}{5 \times 4} = \frac{16}{20}, \frac{4 \times 5}{5 \times 5} = \frac{20}{25}, \frac{4 \times 6}{5 \times 6} = \frac{24}{30}$$

So, $\frac{8}{10}$, $\frac{12}{15}$, $\frac{16}{20}$, $\frac{20}{25}$ and $\frac{24}{30}$ are five equivalent fractions of $\frac{4}{5}$.

3.
$$\frac{5}{6}$$

We multiply the numerator and denominator of $\frac{5}{6}$ by 2, 3, 4, 5 and 6.

$$\therefore \frac{5 \times 2}{6 \times 2} = \frac{10}{12}, \frac{5 \times 3}{6 \times 3} = \frac{15}{18}, \frac{5 \times 4}{6 \times 4} = \frac{20}{24}, \frac{5 \times 5}{6 \times 5} = \frac{25}{30}, \frac{5 \times 6}{6 \times 6} = \frac{30}{36}$$

So, $\frac{10}{12}$, $\frac{15}{18}$, $\frac{20}{24}$, $\frac{25}{30}$ and $\frac{30}{36}$ are five equivalent fractions of $\frac{5}{6}$.

We multiply the numerator and denominator of $\frac{6}{7}$ by 2, 3, 4, 5 and 6.

$$\therefore \frac{6 \times 2}{7 \times 2} = \frac{12}{14}, \frac{6 \times 3}{7 \times 3} = \frac{18}{21}, \frac{6 \times 4}{7 \times 4} = \frac{24}{28}, \frac{6 \times 5}{7 \times 5} = \frac{30}{35}, \frac{6 \times 6}{7 \times 6} = \frac{36}{42}$$

So, $\frac{12}{14}, \frac{18}{21}, \frac{24}{28}, \frac{30}{25}$ and $\frac{36}{42}$ are five equivalent fractions of $\frac{6}{7}$.

5.

We multiply the numerator and denominator of $\frac{7}{8}$ by 2, 3, 4, 5 and 6.

$$\frac{7 \times 2}{8 \times 2} = \frac{14}{16}, \frac{7 \times 3}{8 \times 3} = \frac{21}{24}, \frac{7 \times 4}{8 \times 4} = \frac{28}{32}, \frac{7 \times 5}{8 \times 5} = \frac{35}{40}, \frac{7 \times 6}{8 \times 6} = \frac{42}{48}$$

So, $\frac{14}{16}$, $\frac{21}{24}$, $\frac{28}{32}$, $\frac{35}{40}$ and $\frac{42}{48}$ are five equivalent fractions of $\frac{7}{8}$.

6. $\frac{5}{8}$

We multiply the numerator and denominator of $\frac{5}{8}$ by 2, 3, 4, 5 and 6.

$$\therefore \frac{5 \times 2}{8 \times 2} = \frac{10}{16}, \frac{5 \times 3}{8 \times 3} = \frac{15}{24}, \frac{5 \times 4}{8 \times 4} = \frac{20}{32}, \frac{5 \times 5}{8 \times 5} = \frac{25}{40}, \frac{5 \times 6}{8 \times 6} = \frac{30}{48}$$

So, $\frac{10}{16}$, $\frac{15}{24}$, $\frac{20}{32}$, $\frac{25}{40}$ and $\frac{30}{48}$ are five equivalent fractions of $\frac{5}{8}$.

D. Check whether the pair of fractions given below are equivalent.

1.
$$\frac{7}{8}, \frac{12}{16} \Rightarrow \frac{7}{8} > \frac{12}{16} \Rightarrow 7 \times 16 = 112, 12 \times 8 = 96$$

Both the products are not equal, $112 \neq 96$

So, $\frac{7}{8}$ and $\frac{12}{16}$ are not equivalent fractions.

2.
$$\frac{5}{6}, \frac{15}{18} \Rightarrow \frac{5}{6} \longrightarrow \frac{15}{18} \Rightarrow 5 \times 18 = 90, 15 \times 6 = 90$$

Both the products are equal, 90 = 90

So, $\frac{5}{6}$ and $\frac{15}{18}$ are equivalent fractions.

3.
$$\frac{4}{9}, \frac{12}{20} \Rightarrow \frac{4}{9} > \frac{12}{20} \Rightarrow 4 \times 20 = 80; 12 \times 9 = 108$$

Both the product are not equal, $80 \neq 108$

So, $\frac{4}{9}$ and $\frac{12}{20}$ are not equivalent fractions.

4.
$$\frac{2}{5}, \frac{6}{15} \Rightarrow \frac{2}{5} > \frac{6}{15}$$
 $\Rightarrow 2 \times 15 = 30; 6 \times 5 = 30$

Both the products are equal 30 = 30

So, $\frac{2}{5}$ and $\frac{6}{15}$ are equivalent fractions.

5.
$$\frac{3}{4}, \frac{9}{15} \Rightarrow \frac{3}{4} > \frac{9}{15} \Rightarrow 3 \times 15 = 45, 9 \times 4 = 36$$

Both products are not equal $45 \neq 36$

So, $\frac{3}{4}$ and $\frac{9}{15}$ are equivalent fractions.

6.
$$\frac{2}{3}, \frac{8}{12} \Rightarrow \frac{2}{3} > \frac{8}{12} \Rightarrow 2 \times 12 = 24; 8 \times 3 = 24$$

Both the products are equal, 24 = 24

So, $\frac{2}{3}$ and $\frac{8}{12}$ are equivalent fractions.

Exercise 5.3

A. Reduce the following fractions to the lowest term by dividing with their HCF.

$$1. \quad \frac{18}{15} \Rightarrow 18 = 2 \times 3 \times 3$$

$$15 = 3 \times 5$$

$$:: HCF = 3$$

2.
$$\frac{32}{50} \Rightarrow 32 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$$
;

$$50 = 2 \times 5 \times 5$$

$$:: HCF = 2$$

$$\therefore \frac{15}{18} = \frac{15 \div 3}{18 \div 3} = \frac{5}{6}.$$

So, $\frac{15}{18}$ is reduced to the lowest term as $\frac{5}{6}$.

$$3. \quad \frac{16}{28} \Rightarrow 16 = 2 \times 2 \times 2 \times 2$$

$$28 = 2 \times 2 \times 7$$

$$:: HCF = 2 \times 2 = 4$$

$$\therefore \frac{16}{28} = \frac{16 \div 4}{28 \div 4} = \frac{4}{7}$$

So, $\frac{16}{28}$ is reduced to the lowest term as $\frac{4}{7}$.

$$5. \quad \frac{75}{35} \Rightarrow 75 = 3 \times 5 \times 5 \times 7$$

$$35 = 5 \times 7$$

$$:: HCF = 5$$

$$\therefore \frac{75}{35} = \frac{75 \div 5}{35 \div 5} = \frac{15}{7}$$

So, $\frac{75}{35}$ is reduced to the lowest term as $\frac{15}{7}$. So, $\frac{45}{25}$ is reduced to the lowest term as $\frac{9}{5}$.

7.
$$\frac{55}{100} \Rightarrow 55 = 5 \times 11$$

$$100 = 2 \times 2 \times 5 \times 5$$

$$\therefore \frac{55}{100} = \frac{55 \div 5}{100 \div 5} = \frac{11}{20}$$

$$\therefore \frac{32}{50} = \frac{32 \div 2}{50 \div 2} = \frac{16}{25}$$

So, $\frac{32}{50}$ is reduced to the lowest term as $\frac{16}{25}$.

4.
$$\frac{54}{72} \Rightarrow 54 = 2 \times 3 \times 3 \times 3$$

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$\therefore HCF = 2 \times 3 \times 3 = 18$$

: HCF =
$$2 \times 3 \times 3 = 18$$

: $\frac{54}{72} = \frac{54 \div 18}{72 \div 18} = \frac{3}{4}$

So, $\frac{54}{72}$ is reduced to the lowest term as $\frac{3}{4}$.

$$6. \quad \frac{45}{25} \Rightarrow 45 = 3 \times 3 \times 5$$

$$25 = 5 \times 5$$

$$:: HCF = 5$$

$$\therefore \frac{45}{25} = \frac{45 \div 5}{25 \div 5} = \frac{9}{5}$$

8.
$$\frac{112}{92} \Rightarrow 112 = 2 \times 2 \times 2 \times 2 \times 7$$

$$92 = 2 \times 2 \times 23$$

$$:: HCF = 4$$

$$\therefore \frac{112}{92} = \frac{112 \div 4}{92 \div 4} = \frac{28}{23}$$

So, $\frac{55}{100}$ is reduced to the lowest term as $\frac{4}{20}$. So, $\frac{112}{92}$ is reduced to the lowest term as $\frac{28}{23}$.

Reduce the following fractions to the lowest term by dividing them with the common factors.

1.

$$\frac{16^{1}}{\cancel{64}_{4}} = \frac{1}{4}$$
 (Dividing by 2 four times to get the lowest terms)

1 and 4 are co-prime numbers

Hence $\frac{1}{4}$ can not be reduced further.

Thus, $\frac{16}{64}$ is reduced to the lowest term as $\frac{1}{4}$.

2.

$$\frac{38^{19}}{2754} = \frac{19}{27}$$
 (Dividing both numerator and denominator by 2)

19 and 27 are co-prime numbers,

Hence $\frac{19}{27}$ can not be reduced further.

Thus, $\frac{38}{54}$ is reduced to the lowest term as $\frac{19}{27}$.

3. $\frac{19}{38}$

 $\frac{19^1}{380} = \frac{1}{2}$ (Dividing both numerator and denominator by 19)

Hence $\frac{1}{2}$ can not be reduced further.

Thus, $\frac{19}{38}$ is reduced to the lowest term as $\frac{1}{2}$.

4. $\frac{28}{64}$

 $\frac{28^7}{64_{16}} = \frac{7}{16}$ (Dividing by 2 twice to get the lowest terms)

Hence, $\frac{7}{16}$ can not be reduced further.

Thus, $\frac{28}{64}$ is reduced to the lowest term as $\frac{7}{16}$.

5. $\frac{12}{38}$

 $\frac{12^6}{38_{19}} = \frac{6}{19}$ (Diving by 2 to get the lowest terms)

6 and 19 are co-prime numbers.

Hence $\frac{6}{19}$ can not be reduced further.

Thus, $\frac{12}{38}$ is reduced to the lowest term as $\frac{6}{19}$.

6. $\frac{128}{156}$

 $\frac{128^{32}}{156_{39}} = \frac{32}{39}$ (Dividing by 2 twice to get the lowest terms)

32 and 39 are co-prime numbers,

Hence, $\frac{32}{39}$ can not be reduced further.

Thus, $\frac{128}{156}$ is reduced to the lowest term as $\frac{32}{39}$.

7. $\frac{105}{75}$

 $\frac{105^7}{75_5} = \frac{7}{5}$ (First dividing both numerator and denominator by 5 and then dividing it by 3 than the

lowest term of $\frac{105}{75}$ is $\frac{7}{5}$)

7 and 5 are co-prime numbers.

Hence $\frac{7}{5}$ can not be reduced further.

Thus, $\frac{105}{75}$ is reduced to the lowest term as $\frac{7}{5}$.

8. $\frac{150}{124}$

 $\frac{150}{124} = \frac{75}{62}$ (Dividing both numerator and denominator by 2 to get the lowest term)

75 and 62 are co-prime numbers.

Hence $\frac{75}{62}$ can not be reduced further.

Thus, $\frac{150}{124}$ is reduced to the lowest term as $\frac{75}{62}$.

Exercise 5.4

Fill in the blanks using <, > or =.

1.
$$\frac{3}{4} \square \frac{1}{5}$$

Compare $\frac{3}{4}$ and $\frac{1}{5}$.

LCM of 4 and 5 is 20.

Convert the fractions into equivalent fractions with denominator 20

$$\frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$$
;

$$\frac{1}{5} = \frac{1\times4}{5\times4} = \frac{4}{20}$$

Now, $\frac{15}{20} = \frac{4}{20}$ So $\frac{3}{4} = \frac{1}{5}$.

(Then denominator are same, so we compare the numerators)

2.
$$\frac{7}{8} \square \frac{2}{3}$$

Compare $\frac{7}{8}$ and $\frac{2}{3}$.

LCM of 8 and 3 is 24.

Convert the fractions into equivalent fractions with denominator 24

$$\frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24} \; ; \; \frac{2}{3} = \frac{2 \times 8}{3 \times 8} = \frac{16}{24}$$

$$\frac{21}{24} = \frac{16}{24}$$

(The denominator are same, so we compare the numerators).

$$\frac{7}{8}$$
 $\boxed{\frac{2}{3}}$

3. $\frac{3}{4} \square \frac{2}{3}$

Compare $\frac{3}{4}$ and $\frac{2}{3}$.

LCM of 4 and 3 is 12.

Convert the fractions into equivalent fractions with denominator 12

$$\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}; \quad \frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

Now
$$\frac{9}{12} = \frac{8}{12}$$

(Then denominator are same, so we compare the numerators)

So,
$$\frac{3}{4} \equiv \frac{2}{3}$$
.

4. $\frac{1}{12} \Box \frac{5}{7}$

Compare $\frac{1}{12}$ and $\frac{5}{7}$.

LCM of 7 and 12 is 84.

Covert the fractions into equivalent fractions with denominator 84

 $\frac{1}{12} = \frac{1 \times 7}{12 \times 7} = \frac{7}{84}; \frac{5}{7} = \frac{5 \times 12}{7 \times 12} = \frac{60}{84}$ (Then denominator are same, so we compare the numerators)

Now
$$\frac{7}{84} = \frac{60}{84}$$

$$\frac{1}{12} = \frac{5}{7}$$

5. $\frac{7}{10} \square \frac{3}{4}$

Compare $\frac{7}{10}$ and $\frac{3}{4}$.

LCM of 10 and 4 is 20

Convert the fractions into equivalent fractions with denominator 20.

$$\frac{7}{10} = \frac{7 \times 2}{10 \times 2} = \frac{14}{20}; \quad \frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$$

 $\frac{14}{20}$ $\frac{15}{20}$ (Then denominator are same, so, we compare the numerators)

 $\frac{7}{10}$ $\frac{3}{4}$. So,

6. $\frac{9}{10} \square \frac{7}{8}$

Compare $\frac{9}{10}$ and $\frac{7}{8}$

LCM of 10 and 8 is 40

Convert the fractions into equivalent fractions with denominator 40

$$\frac{9}{10} = \frac{9 \times 4}{10 \times 4} = \frac{36}{40}; \ \frac{7}{8} = \frac{7 \times 5}{8 \times 5} = \frac{35}{40}$$

 $\frac{36}{40} = \frac{35}{40}$ (Then denominator are same, so, we compare the numerators)

So $\frac{9}{10} \square \frac{7}{8}$.

7. $\frac{2}{8} \square \frac{3}{5}$

Compare $\frac{2}{8}$ and $\frac{3}{5}$.

LCM of 8 and 5 is 40.

Convert the fractions into equivalent fractions with denominator 40.

$$\frac{2}{8} = \frac{2 \times 5}{8 \times 5} = \frac{10}{40}; \ \frac{3}{5} = \frac{3 \times 8}{5 \times 8} = \frac{24}{40}$$

Now, $\frac{10}{40} = \frac{24}{40}$ (Then denominator are same, so we compare the numerator)

 $\frac{2}{8}$ $\frac{3}{5}$ So,

8. $\frac{4}{5} \square \frac{3}{4}$

Compare $\frac{4}{5}$ and $\frac{3}{4}$

LCM of 5 and 4 is 20.

Convert the fractions into equivalent fractions with denominator 20

$$\frac{4}{5} = \frac{4 \times 4}{5 \times 4} = \frac{16}{20}; \frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$$

Now, $\frac{16}{20} > \frac{15}{20}$ (Then denominator are same, so we compare the numerator) So, $\frac{4}{5} > \frac{3}{4}$.

B. Arrange in ascending order.

1.
$$\frac{2}{5}$$
, $\frac{7}{10}$, $\frac{4}{15}$, $\frac{5}{20}$

Let's find the LCM of the denominators of the given fractions.

LCM of 5, 10, 15 and $20 = 2 \times 2 \times 3 \times 5 = 60$

Now, we shall form equivalent fractions with denominator 60.

$$\frac{2}{5} = \frac{2 \times 12}{5 \times 12} = \frac{24}{60}; \frac{7}{10} = \frac{7 \times 6}{10 \times 6} = \frac{42}{60};$$
$$\frac{4}{15} = \frac{4 \times 4}{15 \times 4} = \frac{16}{60}; \frac{5}{20} = \frac{5 \times 3}{20 \times 3} = \frac{15}{60}$$

Arrange $\frac{24}{60}$, $\frac{42}{60}$, $\frac{16}{60}$ and $\frac{15}{60}$ in ascending order clearly $\frac{15}{60} < \frac{16}{60} < \frac{24}{60} < \frac{42}{60}$. So, $\frac{5}{20} < \frac{4}{15} < \frac{2}{5} < \frac{7}{10}$.

2. $\frac{3}{12}, \frac{7}{8}, \frac{2}{4}, \frac{2}{6}$

Let's find the LCM of denominators of the given fractions.

LCM of 12, 8, 4 and $6 = 2 \times 2 \times 2 \times 3 = 24$

Now, we shall form equivalent fractions with denominator 24.

$$\frac{3}{12} = \frac{3 \times 2}{12 \times 2} = \frac{6}{24}; \frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24}; \frac{2}{4} = \frac{2 \times 6}{4 \times 6} = \frac{12}{24}; \frac{2}{6} = \frac{2 \times 4}{6 \times 4} = \frac{8}{24}$$

Arrange $\frac{6}{24}, \frac{21}{24}, \frac{12}{24}$ and $\frac{8}{24}$ in ascending order

Clearly
$$\frac{6}{24} < \frac{8}{24} < \frac{12}{24} < \frac{21}{24}$$

So, $\frac{3}{12} < \frac{2}{6} < \frac{2}{4} < \frac{7}{8}$.

3.
$$1\frac{1}{3}$$
, $1\frac{2}{5}$, $1\frac{5}{6}$, $1\frac{7}{10}$

Mixed fraction convert into proper fraction

Than,
$$1\frac{1}{3} = \frac{3 \times 1 + 1}{3} = \frac{4}{3}; 1\frac{2}{5} = \frac{5 \times 1 + 2}{5} = \frac{7}{5};$$
$$1\frac{5}{6} = \frac{6 \times 1 + 5}{6} = \frac{11}{6}; 1\frac{7}{10} = \frac{10 \times 1 + 7}{10} = \frac{17}{10}$$

Now fractions are $\frac{4}{3}$, $\frac{7}{5}$, $\frac{11}{6}$ and $\frac{17}{10}$

Find the LCM of denominators of the given fractions

LCM of 3, 5, 6 and
$$10 = 2 \times 3 \times 5 = 30$$

Now, we shall form equivalent fractions with denominator 30.

$$\frac{4}{3} = \frac{4 \times 10}{3 \times 10} = \frac{40}{30}; \frac{7}{5} = \frac{7 \times 6}{5 \times 6} = \frac{42}{30};$$

$$\frac{11}{6} = \frac{11 \times 5}{6 \times 5} = \frac{55}{30}; \frac{17}{10} = \frac{17 \times 3}{10 \times 3} = \frac{51}{30}$$

Arrange $\frac{40}{30}, \frac{42}{30}, \frac{55}{30}$ and $\frac{51}{30}$ in ascending order

Clearly
$$\frac{40}{30} < \frac{42}{30} < \frac{51}{30} < \frac{55}{30}$$

So, the ascending order is $\frac{4}{3}$, $\frac{7}{5}$, $\frac{17}{10}$, $\frac{11}{6}$ or $1\frac{1}{3} < 1\frac{2}{5} < 1\frac{7}{10} < 1\frac{5}{6}$.

C. Arrange in descending order.

1.
$$\frac{7}{16}, \frac{1}{4}, \frac{11}{12}, \frac{17}{24}$$

Let's find the LCM of denominators of the given fractions

LCM of 16, 4, 12 and $24 = 2 \times 2 \times 2 \times 2 \times 3 = 48$

Now, we shall form equivalent fractions with denominator 48.

$$\frac{7}{16} = \frac{7 \times 3}{16 \times 3} = \frac{21}{48}; \quad \frac{1}{4} = \frac{1 \times 12}{4 \times 12} = \frac{12}{48};$$
$$\frac{11}{12} = \frac{11 \times 4}{12 \times 4} = \frac{44}{48}; \quad \frac{17}{24} = \frac{17 \times 2}{24 \times 2} = \frac{34}{48}$$

Arrange $\frac{21}{48}, \frac{12}{48}, \frac{44}{48}$ and $\frac{34}{48}$ in descending order.

$$\frac{44}{48} > \frac{34}{48} > \frac{21}{48} > \frac{12}{48}$$
So, $\frac{11}{12} > \frac{17}{24} > \frac{7}{16} > \frac{1}{4}$.

2.
$$\frac{2}{3}, \frac{1}{5}, \frac{1}{2}, \frac{5}{6}$$

Let's find the LCM of denominator of the given fractions

LCM of 3, 5, 2 and $6 = 2 \times 3 \times 5 = 30$

Now, we shall form equivalent fractions with denominator 30.

$$\frac{2}{3} = \frac{2 \times 10}{3 \times 10} = \frac{20}{30}; \frac{1}{5} = \frac{1 \times 6}{5 \times 6} = \frac{6}{30}; \frac{1}{2} = \frac{1 \times 15}{2 \times 15} = \frac{15}{30}; \frac{5}{6} = \frac{5 \times 5}{6 \times 5} = \frac{25}{30}$$

Arrange $\frac{20}{30}$, $\frac{6}{30}$, $\frac{15}{30}$ and $\frac{25}{30}$ in descending order

$$\frac{25}{30} > \frac{20}{30} > \frac{15}{30} > \frac{6}{30}$$

So, $\frac{5}{6} > \frac{2}{3} > \frac{1}{2} > \frac{1}{5}$.

3.
$$2\frac{2}{3}, 2\frac{2}{7}, 2\frac{1}{14}, 2\frac{1}{6}$$

Mixed fraction convert into proper fraction

Than
$$2\frac{2}{3} = \frac{3 \times 2 + 2}{3} = \frac{8}{3}$$
; $2\frac{2}{7} = \frac{7 \times 2 + 2}{7} = \frac{16}{7}$; $2\frac{1}{14} = \frac{14 \times 2 + 1}{14} = \frac{29}{14}$; $2\frac{1}{6} = \frac{6 \times 2 + 1}{6} = \frac{13}{6}$;

Now fractions are
$$\frac{8}{3}$$
, $\frac{16}{7}$, $\frac{29}{14}$ and $\frac{13}{6}$

Find the LCM of denominators of the given fractions;

LCM of 3, 7, 14 and
$$6 = 2 \times 3 \times 7 = 42$$

Now, we shall form equivalent fraction with denominator 42

$$\frac{8}{3} = \frac{8 \times 14}{3 \times 14} = \frac{112}{42}; \frac{16}{7} = \frac{16 \times 6}{7 \times 6} = \frac{96}{42}$$

$$29 \quad 29 \times 3 \quad 87 \quad 13 \quad 13 \times 7 \quad 91$$

$$\frac{29}{14} = \frac{29 \times 3}{14 \times 3} = \frac{87}{42}; \frac{13}{6} = \frac{13 \times 7}{6 \times 7} = \frac{91}{42}$$

Arrange $\frac{112}{42}$, $\frac{96}{42}$, $\frac{87}{42}$ and $\frac{91}{42}$ in descending order.

$$\frac{112}{42} > \frac{96}{42} > \frac{91}{42} > \frac{87}{42}$$

So,
$$\frac{8}{3} > \frac{16}{7} > \frac{13}{6} > \frac{29}{14}$$

The descending order is $2\frac{2}{3} > 2\frac{2}{7} < 2\frac{1}{6} < 1\frac{1}{14}$.

2	3,	7,	14,	6
3	3,	7,	7,	3
7	1,	7,	7,	1
	1,	1,	1,	1

Exercise 5.5

A. Fill in the blanks.

1.
$$\frac{5}{7} + 0 = \frac{5}{7}$$

2.
$$\frac{3}{13} - \mathbf{0} = \frac{3}{13}$$

3.
$$\frac{12}{17} + \frac{8}{15} = \frac{8}{15} + \frac{12}{17}$$

B. Add.

1.
$$\frac{9}{20} + \frac{13}{15}$$

LCM of 20 and 15

$$8 = 5 \times 3 \times 4 = 60$$
Now, $\frac{9}{20} = \frac{9 \times 3}{20 \times 3} = \frac{27}{60}, \frac{13}{15} = \frac{13 \times 4}{15 \times 4} = \frac{52}{60}$

$$\therefore \frac{27}{60} + \frac{52}{60} = \frac{27 + 52}{60} = \frac{79}{60} = 1\frac{19}{16}$$

2.
$$3\frac{2}{3}+1\frac{1}{4}$$

Mixed fraction convert into proper fraction.
$$3\frac{2}{3} = \frac{3\times 3 + 2}{3} = \frac{11}{3} \; ; \; 1\frac{1}{4} = \frac{4\times 1 + 1}{4} = \frac{5}{4}$$

Now;
$$\frac{11}{3} = \frac{11 \times 4}{3 \times 4} = \frac{44}{12}$$
; $\frac{5}{4} = \frac{5 \times 3}{4 \times 3} = \frac{15}{12}$

$$\therefore \frac{44}{12} + \frac{15}{12} = \frac{44+15}{12} = \frac{59}{12} = 4\frac{11}{12}$$

3.
$$2\frac{1}{10} + 3\frac{4}{5}$$

Mixed fraction convert into proper fraction

$$2\frac{1}{10} = \frac{21}{10}$$
; $3\frac{4}{5} = \frac{19}{5}$

LCM of 10 and 5 = 10

Now;
$$\frac{21}{10} = \frac{21 \times 1}{10 \times 1} = \frac{21}{10}$$
; $\frac{19}{5} = \frac{19 \times 2}{5 \times 2} = \frac{38}{10}$

$$\frac{21}{10} + \frac{38}{10} = \frac{21 + 38}{10} = \frac{59}{10} = 5\frac{9}{10}$$

4.
$$\frac{3}{11} + \frac{2}{5} + \frac{4}{55}$$

LCM of 11, 5 and
$$55 = 11 \times 5 = 55$$

LCM of 11, 5 and
$$55 = 11 \times 5 = 55$$

Now, $\frac{3}{11} = \frac{3 \times 5}{11 \times 5} = \frac{15}{55}, \frac{2}{5} = \frac{2 \times 11}{5 \times 11} = \frac{22}{55}, \frac{4}{55} = \frac{4 \times 1}{55 \times 1} = \frac{4}{55}$

$$\therefore \frac{15}{55} + \frac{22}{55} + \frac{4}{55} = \frac{15 + 22 + 4}{55} = \frac{41}{55}$$

5.
$$\frac{4}{9} + \frac{7}{24} + \frac{23}{36}$$

LCM of 9. 24 and
$$36 = 3 \times 3 \times 2 \times 2 \times 2 = 72$$

LCM of 9, 24 and 36 =
$$3 \times 3 \times 2 \times 2 \times 2 = 72$$

Now, $\frac{4}{9} = \frac{4 \times 8}{9 \times 8} = \frac{32}{72}$; $\frac{7}{24} = \frac{7 \times 3}{24 \times 3} = \frac{21}{72}$; $\frac{23}{36} = \frac{23 \times 2}{36 \times 2} = \frac{46}{72}$

$$\therefore \frac{32}{72} + \frac{21}{72} + \frac{46}{72} = \frac{32 + 21 + 46}{72}$$
$$= \frac{99}{72} = \frac{11}{8} = 1\frac{3}{8}$$

6.
$$3+1\frac{4}{9}+2\frac{2}{3}$$

Mixed fraction convert into proper fraction

$$1\frac{4}{9} = \frac{13}{9}$$
; $2\frac{2}{3} = \frac{8}{3}$

LCM of 1, 9 and
$$3 = 9$$

Now;
$$\frac{3}{1} = \frac{3 \times 9}{1 \times 9} = \frac{27}{9}$$
; $\frac{13}{9} = \frac{13 \times 1}{9 \times 1} = \frac{13}{9}$; $\frac{8}{3} = \frac{8 \times 3}{3 \times 3} = \frac{24}{9}$

$$\therefore \frac{27}{9} + \frac{13}{9} + \frac{24}{9} = \frac{27 + 13 + 24}{9} = \frac{64}{9} = 7\frac{1}{9}.$$

C. Subtract.

1.
$$10-\frac{6}{7}$$

LCM of 1 and
$$7 = 7$$

Now,
$$\frac{10}{1} = \frac{10 \times 7}{1 \times 7} = \frac{70}{7}$$
; $\frac{6 \times 1}{7 \times 1} = \frac{6}{7}$

$$\therefore \frac{70}{7} - \frac{6}{7} = \frac{70 - 6}{7} = \frac{64}{7} = 9\frac{1}{7}$$

2.
$$2\frac{4}{9} - \frac{5}{12}$$

Mixed fraction convert into proper fraction

$$2\frac{4}{9} = \frac{9 \times 2 + 4}{9} = \frac{18 + 4}{9} = \frac{22}{9}$$

LCM of 9 and
$$12 = 3 \times 3 \times 4 = 36$$

Now,
$$\frac{22}{9} = \frac{22 \times 4}{9 \times 4} = \frac{88}{36}$$
; $\frac{5}{12} = \frac{5 \times 3}{12 \times 3} = \frac{15}{36}$

$$\therefore \frac{88}{36} - \frac{15}{36} = \frac{88 - 15}{36} = \frac{73}{36} = 2\frac{1}{36}.$$

3.
$$2\frac{13}{36} - 1\frac{5}{9}$$

Mixed fraction convert into proper fraction

$$2\frac{13}{36} = \frac{36 \times 2 + 13}{36} = \frac{85}{36}; 1\frac{5}{9} = \frac{9 \times 1 + 5}{9} = \frac{14}{9}$$

LCM of 36 and $9 = 3 \times 3 \times 4 = 36$

Now,
$$\frac{85}{36} = \frac{85 \times 1}{36 \times 1} = \frac{85}{36}; \frac{14}{9} = \frac{14 \times 4}{9 \times 4} = \frac{56}{36}$$

$$\therefore \quad \frac{85}{36} - \frac{56}{36} = \frac{85 - 56}{36} = \frac{29}{36}$$

4.
$$3\frac{4}{7} - \frac{3}{4}$$

Mixed fraction convert into proper fraction

$$3\frac{4}{7} = \frac{7 \times 3 + 4}{7} = \frac{25}{7}$$

LCM of 7 and 4 is 28.

Now,
$$\frac{25}{7} = \frac{25 \times 4}{7 \times 4} = \frac{100}{28}$$
; $\frac{3}{4} = \frac{3 \times 7}{4 \times 7} = \frac{21}{28}$

$$\therefore \frac{100}{28} - \frac{21}{28} = \frac{100 - 21}{28} = \frac{79}{28} = 2\frac{23}{28}$$

5.
$$4\frac{1}{5} - \frac{2}{3}$$

Mixed fraction convert into proper fraction

$$4\frac{1}{5} = \frac{5 \times 4 + 1}{5} = \frac{21}{5}$$

LCM of 5 and 3 = 15

Now,
$$\frac{21}{5} = \frac{21 \times 3}{5 \times 3} = \frac{63}{15}$$
; $\frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$

$$\therefore \frac{63}{15} - \frac{10}{15} = \frac{63 - 10}{15} = \frac{53}{15} = 3\frac{8}{15}.$$

6.
$$5\frac{3}{8} - 1\frac{3}{4}$$

Mixed fraction convert into proper fraction

$$5\frac{3}{8} = \frac{8 \times 5 + 3}{8} = \frac{43}{8}$$
; $1\frac{3}{4} = \frac{4 \times 1 + 3}{4} = \frac{7}{4}$

LCM of 8 and 4 = 8

Now,
$$\frac{43}{8} = \frac{43 \times 1}{8 \times 1} = \frac{43}{8}$$
; $\frac{7}{4} = \frac{7 \times 2}{4 \times 2} = \frac{14}{8}$

$$\therefore \quad \frac{43}{8} - \frac{14}{8} = \frac{43 - 14}{8} = \frac{29}{8} = 3\frac{5}{8}$$

D. Decide whether to add or subtract:

1. Radhika spent money on a movie
$$=\frac{1}{2}$$

She spent on a new pen
$$=\frac{1}{4}$$

Total money spent by her
$$=\frac{1}{2} + \frac{1}{4} = \frac{2+1}{4} = \frac{3}{4}$$

So, Radhika spent $\frac{3}{4}$ of her pocket money.

2. Aakansha done her homework on Saturday = $\frac{3}{8}$

She done her home work on Sunday $=\frac{1}{4}$

She done total home work
$$=$$
 $\frac{3}{8} + \frac{1}{4}$

$$= \frac{3+2}{8} = \frac{5}{8}$$

So Aakansha did $\frac{5}{8}$ of her home work over the weeded.

3. Milk purchase in the morning = 3 L

Milk left in the evening $=\frac{5}{8}$ L

∴ milk used in the day =
$$3 - \frac{5}{8}$$

= $\frac{24 - 5}{8} = \frac{19}{8}L = 2\frac{3}{8}L$

So, Mr. Kashyap used $2\frac{3}{8}$ L of milk during a day.

4. Length of ribbon = $5\frac{1}{2}$ metres = $\frac{11}{2}$ metres

A pieces cut from ribbon = $3\frac{2}{3}$ metres = $\frac{11}{3}$ metres

∴ Left ribbon =
$$\frac{11}{2} - \frac{11}{3}$$

= $\frac{33 - 22}{6} = \frac{11}{6} = 1\frac{5}{6}$ metres

Hence, $1\frac{5}{6}$ metre of ribbon is left.

5. Petrol in the bike on Sunday morning = 6 L

Petrol left at night = $1\frac{1}{4} L = \frac{5}{4} L$

∴Petrol used
$$=\frac{6}{1}L - \frac{5}{4}L$$

 $=\frac{6 \times 4 - 5}{4}L$
 $=\frac{24 - 5}{4}$
 $=\frac{19}{4}L = 4\frac{3}{4}L$

Hence, $4\frac{3}{4}$ of petrol was used during the day.

Exercise 5.6

1.
$$\frac{11}{15} \times 1 = \frac{11}{15}$$

A. Fill in the blanks.
1.
$$\frac{11}{15} \times 1 = \frac{11}{15}$$

2. $\frac{7}{9} \times \frac{1}{2} = \frac{1}{2} \times \frac{7}{9} = \frac{7}{18}$
4. $\frac{8}{13} \times \mathbf{0} = 0$
5. $\frac{9}{8} \times \mathbf{1} = \frac{9}{8}$

5.
$$\frac{9}{9} \times 1 = \frac{9}{9}$$

7.
$$\left(\frac{2}{3} \times \frac{4}{5}\right) \times \frac{1}{4} = \frac{2}{3} \times \left(\frac{4}{5} \times \frac{1}{4}\right) = \frac{2}{15}$$
.

3.
$$\frac{5}{7} \times 14 = 14 \times \frac{5}{7}$$

6.
$$0 \times \frac{14}{15} = \mathbf{0}$$

B. Find the product and write the answer in lowest form.

1.
$$10 \times 2\frac{1}{5}$$

$$\therefore 10^2 \times \frac{31}{51} = 22$$

4.
$$24 \times 3\frac{1}{4}$$

$$\therefore 24^6 \times \frac{13}{4_1} = 78$$

2.
$$5\frac{1}{8} \times 4$$

2.
$$5\frac{1}{8} \times 4$$
 3. $3 \times 2\frac{2}{15}$ $\therefore \frac{41}{82} \times 4^{1} = \frac{41}{2} = 20\frac{1}{2}$ $\therefore \frac{1}{3} \times \frac{32}{15} = \frac{32}{5} = 6\frac{2}{5}$

5.
$$\frac{9}{22} \times 33$$

$$\therefore = \frac{9 \times 3}{2} = \frac{27}{2} = 13\frac{1}{2}$$
$$= 13\frac{1}{2}$$

6.
$$\frac{11}{24} \times 32$$

$$\therefore = \frac{9 \times 3}{2} = \frac{27}{2} = 13\frac{1}{2} \qquad \qquad \therefore = \frac{11}{3} \times 4 = \frac{44}{3} = 14\frac{2}{3} = \frac{44}{3}$$
$$= 13\frac{1}{2} \qquad = 14\frac{2}{3}$$

7.
$$15 \times \frac{12}{20}$$

$$\therefore 15^3 \times \frac{12^3}{20_{4_1}} = 3 \times 3 = 9$$

8.
$$6\frac{1}{16} \times 36$$

$$\therefore \quad 15^{3} \times \frac{12^{3}}{20_{4_{1}}} = 3 \times 3 = 9 \qquad \qquad \therefore \quad \frac{97}{16_{4}} \times 36^{9} = \frac{97 \times 9}{4} = \frac{873}{4} = 218\frac{1}{4}$$

C. Complete:

1.
$$\frac{3}{8}$$
 of $36 = \frac{3}{8} \times 36$
= $\frac{3}{2} \times 9 = \frac{27}{2} = 13$

1.
$$\frac{3}{8}$$
 of $36 = \frac{3}{8} \times 36$ **2.** $\frac{4}{11}$ of $55 = \frac{4}{11} \times 55$ **3.** $\frac{4}{15}$ of $\frac{20}{21} = \frac{4}{15} \times \frac{20}{21}$ $= \frac{3}{2} \times 9 = \frac{27}{2} = 13\frac{1}{2}$ $= 4 \times 5 = 20$ $= \frac{4 \times 4}{3 \times 21} = \frac{16}{33}$ **4.** $\frac{24}{25}$ of $\frac{35}{36} = \frac{24}{25} \times \frac{35}{36}$ **5.** $\frac{7}{8}$ of $\frac{16}{21} = \frac{7}{8} \times \frac{16}{21}$ $= \frac{1 \times 2}{1 \times 3} = \frac{2}{3}$ **6.** $1\frac{1}{2}$ or $3\frac{4}{5} = \frac{3}{2} \times \frac{19}{5}$ $= \frac{57}{10} = 5\frac{7}{10}$

2.
$$\frac{4}{11}$$
 of $55 = \frac{4}{11} \times 55$

$$=4\times5=20$$

5.
$$\frac{7}{8}$$
 of $\frac{16}{21} = \frac{7}{8} \times \frac{16}{21}$
= $\frac{1 \times 2}{1 \times 3} = \frac{2}{3}$

3.
$$\frac{4}{15}$$
 of $\frac{20}{21} = \frac{4}{15} \times \frac{20}{21}$
= $\frac{4 \times 4}{3 \times 21} = \frac{16}{33}$

6.
$$1\frac{1}{2}$$
 or $3\frac{4}{5} = \frac{3}{2} \times \frac{19}{5}$
= $\frac{57}{10} = 5\frac{7}{10}$

D. Multiply and write the answer in lowest form. 1. $\frac{1}{9} \times \frac{1}{2} = \frac{1 \times 1}{9 \times 2} = \frac{1}{18}$

1.
$$\frac{1}{9} \times \frac{1}{2} = \frac{1 \times 1}{9 \times 2} = \frac{1}{18}$$

3.
$$3\frac{3}{5} \times 5\frac{1}{2} = \frac{18}{5} \times \frac{11}{2} = \frac{9}{5} \times \frac{11}{1} = \frac{99}{5}$$

5.
$$10\frac{3}{8} \times 3\frac{1}{9} = \frac{83}{8} \times \frac{28}{9} = \frac{83}{2} \times \frac{7}{9} = \frac{581}{18}$$

7.
$$1\frac{1}{4} \times \frac{2}{5} \times \frac{4}{5} = \frac{5}{4} \times \frac{2}{5} \times \frac{4}{5} = \frac{2}{5}$$

2.
$$\frac{2}{7} \times \frac{8}{9} \times \frac{1}{4} = \frac{2}{7} \times \frac{2}{9} = \frac{4}{63}$$

4.
$$1\frac{2}{7} \times 3\frac{1}{5} = \frac{9}{7} \times \frac{16}{5} = \frac{144}{35}$$

6.
$$\frac{1}{8} \times \frac{1}{6} \times 1\frac{1}{2} = \frac{1}{8} \times \frac{1}{6} \times \frac{3}{2} = \frac{1}{8} \times \frac{1}{4} = \frac{1}{32}$$

3.
$$3\frac{3}{5} \times 5\frac{1}{2} = \frac{18}{5} \times \frac{11}{2} = \frac{9}{5} \times \frac{11}{1} = \frac{99}{5}$$
4. $1\frac{2}{7} \times 3\frac{1}{5} = \frac{9}{7} \times \frac{16}{5} = \frac{144}{35}$
5. $10\frac{3}{8} \times 3\frac{1}{9} = \frac{83}{8} \times \frac{28}{9} = \frac{83}{2} \times \frac{7}{9} = \frac{581}{18}$
6. $\frac{1}{8} \times \frac{1}{6} \times 1\frac{1}{2} = \frac{1}{8} \times \frac{1}{6} \times \frac{3}{2} = \frac{1}{8} \times \frac{1}{4} = \frac{1}{32}$
7. $1\frac{1}{4} \times \frac{2}{5} \times \frac{4}{5} = \frac{5}{4} \times \frac{2}{5} \times \frac{4}{5} = \frac{2}{5}$
8. $1\frac{1}{2} \times 2\frac{1}{3} \times 3\frac{1}{4} = \frac{3}{2} \times \frac{7}{3} \times \frac{13}{4} = \frac{91}{8}$

E. Solve these story sums.

1. Quantity of cocoa in a chocolate bar
$$=\frac{3}{4}$$
 cups

:. Quantity of cocoa in 16 chocolate bars
$$= \left(\frac{3}{4} \times 16\right)$$
 cups $= 12$ cups

2. Paint needs to colour 1 square metre of wall
$$= 2\frac{3}{4}L = \frac{11}{4}L$$

∴ Paint needs to colour
$$\frac{7}{2}$$
 square metre of wall $= \left(\frac{11}{4} \times \frac{7}{2}\right) L = \frac{77}{8} L = 9\frac{5}{8} L$.

Let's Do≣

1.
$$\frac{5}{2}$$

2.
$$\frac{7}{4}$$

3.
$$\frac{2}{1}$$

4.
$$\frac{7}{6}$$

5.
$$\frac{3}{1}$$

- **6.** $\frac{5}{6}$
- 7. $\frac{9}{8}$
- **8.** $\frac{5}{3}$
- **9.** $\frac{7}{9}$

Exercise 5.7

A. Fill in the blanks:

1.
$$7 \times \frac{1}{7} = 1$$

2.
$$\frac{5}{8} \times \frac{8}{5} = 1$$

3.
$$\frac{15}{13} \times \frac{13}{15} = 1$$

4.
$$3\frac{1}{3} \times \frac{3}{10} = 1$$

5.
$$\frac{9}{20} \times 2\frac{2}{9} = 1$$

6.
$$\frac{11}{7} \times \frac{7}{11} = 1$$

B. Find the reciprocal (or multiplicative inverse) of each of the following:

1.
$$1 \Rightarrow \text{Reciprocal of } 1 = \frac{1}{1}$$

3.
$$19 \Rightarrow \text{Reciprocal of } 19 = \frac{1}{19}$$

5.
$$\frac{11}{3}$$
 \Rightarrow Reciprocal of $\frac{11}{3} = \frac{3}{11}$

7.
$$2\frac{1}{7} = \frac{15}{5} \Rightarrow \text{Reciprocal of } 2\frac{1}{7} = \frac{7}{15}$$

9.
$$5\frac{1}{2} = \frac{11}{2} \Rightarrow \text{Reciprocal of } \frac{11}{2} = \frac{2}{11}$$

11.
$$6\frac{2}{3} = \frac{20}{3} \Rightarrow \text{Reciprocal of } \frac{20}{3} = \frac{3}{20}$$

2.
$$6 \Rightarrow \text{Reciprocal of } 6 = \frac{1}{6}$$

4.
$$\frac{2}{5}$$
 \Rightarrow Reciprocal of $\frac{2}{5} = \frac{5}{2}$

6.
$$\frac{21}{8}$$
 \Rightarrow Reciprocal of $\frac{21}{8} = \frac{8}{21}$

8.
$$\frac{15}{23}$$
 \Rightarrow Reciprocal of $\frac{15}{23} = \frac{23}{15}$

10.
$$\frac{12}{17}$$
 \Rightarrow Reciprocal of $\frac{12}{17} = \frac{17}{12}$

12.
$$\frac{5}{11}$$
 \Rightarrow Reciprocal of $\frac{5}{11} = \frac{11}{5}$

Let's Do≣

Divide:

1.
$$7 \div \frac{1}{2} = 7 \times \frac{2}{1} = 14$$

3.
$$9 \div \frac{5}{6} = 9 \times \frac{6}{5} = \frac{54}{5} = 10\frac{4}{5}$$

5.
$$\frac{2}{7} \div 2 = \frac{2}{7} \times \frac{1}{2} = \frac{1}{7}$$

7.
$$\frac{2}{5} \div \frac{2}{3} = \frac{2}{5} \times \frac{3}{2} = \frac{3}{5}$$

2.
$$6 \div \frac{2}{3} = 6 \times \frac{3}{2} = 9$$

4.
$$\frac{3}{4} \div 3 = \frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$$

6.
$$\frac{5}{6} \div 8 = \frac{5}{6} \times \frac{1}{8} = \frac{5}{48}$$

8.
$$\frac{1}{9} \div \frac{3}{8} = \frac{1}{9} \times \frac{8}{3} = \frac{8}{27}$$

Exercise 5.8

A. Fill in the boxes to complete the following divisions :

1.
$$0 \div \frac{9}{17} = 0$$

2.
$$\frac{7}{9} \div \frac{7}{9} = 1$$

3.
$$\frac{3}{5} \div \frac{3}{5} = 1$$

4.
$$2\frac{1}{3} \div 1 = 2\frac{1}{3}$$

5.
$$\mathbf{0} \div \frac{3}{7} = 0$$

6.
$$1 \div \frac{6}{11} = \frac{11}{6}$$

B. Divide and write the answer in the lowest term:

1.
$$\frac{1}{3} \div 4 = \frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$$

2.
$$6 \div 8 = \frac{6}{8} = \frac{3}{4}$$

3.
$$\frac{5}{9} \div 15 = \frac{5}{9} \times \frac{1}{15} = \frac{1}{9} \times \frac{1}{3} = \frac{1}{27}$$

4.
$$72 \div \frac{6}{7} = 72 \times \frac{7}{6} = 12 \times 7 = 84$$

5.
$$48 \div 2\frac{2}{5} = 48 \div \frac{12}{5} = 48 \times \frac{5}{12} = 4 \times 5 = 20$$
 6. $\frac{12}{13} \div 9 = \frac{12}{13} \times \frac{1}{9} = \frac{4}{13} \times \frac{1}{3} = \frac{4}{39}$

7. 77 by
$$\frac{11}{3} = 77 \div \frac{11}{3} = 77 \times \frac{3}{11} = 7 \times 3 = 21$$
 8. $\frac{11}{4} \div 55 = \frac{11}{4} \times \frac{1}{55} = \frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$

6.
$$\frac{12}{13} \div 9 = \frac{12}{13} \times \frac{1}{9} = \frac{4}{13} \times \frac{1}{3} = \frac{4}{39}$$

8.
$$\frac{11}{4} \div 55 = \frac{11}{4} \times \frac{1}{55} = \frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$$

C. Find the value of each of the following

1.
$$16 \div \frac{2}{5} = 16 \times \frac{5}{2} = 8 \times 5 = 40$$

3.
$$\frac{5}{9} \div \frac{15}{36} = \frac{5}{9} \times \frac{36}{15} = \frac{4}{3}$$

5.
$$9\frac{5}{6} \div 5\frac{1}{6} = \frac{59}{6} \div \frac{31}{6} = \frac{59}{6} \times \frac{6}{31} = \frac{59}{31}$$

7.
$$4\frac{1}{2} \div 4\frac{1}{5} = \frac{9}{2} \div \frac{21}{5} = \frac{9}{2} \times \frac{5}{21} = \frac{3}{2} \times \frac{5}{7} = \frac{15}{14}$$

2.
$$\frac{12}{13} \div \frac{1}{52} = \frac{12}{13} \times 52 = 12 \times 4 = 48$$

4.
$$1\frac{2}{11} \div 2\frac{5}{22} = \frac{13}{11} \div \frac{49}{22} = \frac{13}{11} \times \frac{22}{49} = \frac{13 \times 2}{49} = \frac{26}{49}$$

6.
$$7\frac{3}{5} \div 19 = \frac{38}{5} \times \frac{1}{19} = \frac{2}{5}$$

7.
$$4\frac{1}{2} \div 4\frac{1}{5} = \frac{9}{2} \div \frac{21}{5} = \frac{9}{2} \times \frac{5}{21} = \frac{3}{2} \times \frac{5}{7} = \frac{15}{14}$$
 8. $8\frac{2}{5} \div 2\frac{2}{15} = \frac{42}{5} \div \frac{32}{15} = \frac{42}{5} \times \frac{15}{32} = \frac{21}{1} \times \frac{3}{16} = \frac{63}{10}$

D. Solve these story sums:

1. Cost of 5 kg of sugar = ₹ 137
$$\frac{1}{2}$$
 = ₹ $\frac{275}{2}$

∴ Cost of 1 kg of sugar
$$= ₹ \frac{275}{2} ÷ 5$$

$$= ₹ \frac{275}{2} × \frac{1}{5} = ₹ \frac{55}{2} = ₹27 \frac{1}{2}$$

Hene, the cost of 1 kg of sugar is ₹ $27\frac{1}{2}$

2. Length of total cloth
$$= 25 \text{ m}$$

Number of pieces to cut the cloth = 8

Length of one pieces of cloth
$$= 25 m \div 8 = \frac{25}{8} = 3\frac{1}{8}m$$

Thus, the length of each pieces of cloth is $3\frac{1}{8}$ m.

3. Total length of rope
$$= 30 \text{ m}$$

Length of each pieces of rope
$$= 2\frac{1}{2} \text{ m} = \frac{5}{2} \text{ m}$$

$$\therefore$$
 Number of pieces of the rope = $30 \div \frac{5}{2}$

$$=30 \times \frac{2}{5} = 6 \times 2 = 12$$

Hence, Rahim cut 12 pieces from the rope.

4. Cost of
$$3\frac{1}{2}$$
 kg of apples = ₹157 $\frac{1}{2}$

∴ Cost of 1 kg of apples = ₹ 157
$$\frac{1}{2}$$
 ÷ 3 $\frac{1}{2}$
= ₹ $\frac{315}{2}$ ÷ $\frac{7}{2}$
= ₹ $\frac{315}{2}$ × $\frac{2}{7}$ = ₹ 45

Hence, the cost of 1 kg of apples is ₹45.

Tricky Maths

1. The reciprocal of $\frac{5}{6}$ is $\frac{6}{5}$.

2. The number whose reciprocal is the number itself is 1.

3. The reciprocal of a proper fraction is a / an improper fraction.

4.
$$\frac{13}{19} \times 1 = \frac{13}{19}$$
.

5.
$$\frac{9}{11} \div 1 = \frac{9}{11}$$

6.
$$2\frac{3}{8} + 3\frac{1}{16} = 5\frac{7}{16}$$
.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (b)

2. (d)

3. (b)

4. (b)

5. (c)

6. (d)

NEP Life Skills

* Diya play = $\frac{1}{8}$ of a day = $\frac{1}{8} \times 24$ hr = **3 hours**.

* Diya studies = $\frac{1}{4}$ of a day = $\frac{1}{4} \times 24$ hr = **6 hours**.

* Diya sleeps = $\frac{1}{3}$ of a day = $\frac{1}{3} \times 24$ hr = **8 hours**.











Chapter

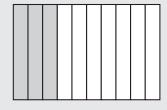
6

Decimals and Percentage

Let's Do≣

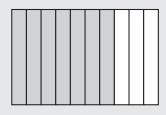
Write the decimals for the coloured part.

1.



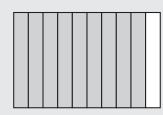
0.3; Three tenths

2.



0.7; Seven tenths

3.



0.9; Nine tenths

Exercise 6.1

A. Complete the table for the coloured part.

	Coloured Parts	Decimal form	Read as
1.		1.2	one and two tenths
2.		2.34	two point three four
3.		0.47	zero point four seven

B. Write the decimals.

- 1. 0.2
- 4. 89.637

- 2. 7.34
- 5. 1000.8

- 3. 100.001
- 6. 0.0001

C. Write in word.

- 1. Two point seventy three
- 3. Six tenths
- 5. Twenty eight point zero seven six
- 2. One point zero seven
- 4. Zero point nine four three
- 6. Eight point zero-zero eight

Tricky Maths

How many decimal places are there? Write in the box.

- 1. 8.6
- One
- 2. 7.96
- Two
- 3. 1.736
- Three
- ł. 0.001

Three

Let's Do≡

Convert into decimals.

1.
$$\frac{3}{10} = \mathbf{0.3}$$

$$2. \quad \frac{14}{100} = \mathbf{0.14}$$

3.
$$\frac{13}{10} = 1.3$$

2.
$$\frac{14}{100} = 0.14$$
 3. $\frac{13}{10} = 1.3$ 4. $\frac{15}{1000} = 0.015$ 5. $\frac{7}{100} = 0.07$

5.
$$\frac{7}{100} = \mathbf{0.07}$$

B. Convert into fractions.

1.
$$3.5 = \frac{35}{10} = \frac{7}{2}$$

$$2. \quad 0.8 = \frac{8}{10} = \frac{4}{5}$$

$$3. \quad 0.93 = \frac{93}{100}$$

2.
$$0.8 = \frac{8}{10} = \frac{4}{5}$$
 3. $0.93 = \frac{93}{100}$ 4. $0.125 = \frac{125}{1000} = \frac{1}{8}$ 5. $7.21 = \frac{721}{100}$

$$5. \quad 7.21 = \frac{721}{100}$$

Exercise 6.2

A. Write the place value of the underlined digits.

1. **132.6**
$$\underline{4} = \frac{4}{100} = 0.04$$

2.
$$87.963 = 8 \times 10 = 80$$

3. **0.876** =
$$\frac{7}{100}$$
 = 0.07

4.
$$5999.99 = 9 \times 100 = 900$$

5. **0.0027** =
$$\frac{0}{10}$$
 = 0

6. **0.0123** =
$$\frac{2}{1000}$$
 = 0.002

Write a decimal for each of the following.

1. **1** +
$$\frac{4}{10}$$
 = 1+ 0.4 = 1.40

4.
$$\frac{6}{10}$$
 + $\frac{4}{100}$ = 0.6 + 0.04 = 0.64

5.
$$\frac{5}{10} + \frac{3}{100} + \frac{1}{1000} = 0.5 + 0.03 + 0.001$$
 6. **0.5** + **00.2** + **0.002** = 0.522

6.
$$0.5 + 00.2 + 0.002 = 0.522$$

9.
$$\frac{5}{10}$$
 + $\frac{9}{1000}$ = 0.5 + 0.009 = 0.509

C. Write the decimal expansion for each of the following.

1. **4.6** =
$$4 + \frac{6}{10}$$

$$2. \quad \mathbf{16.15} \quad = \quad 10 + 6 + \frac{1}{10} + \frac{5}{100}$$

3. **0.435** =
$$\frac{4}{10} + \frac{3}{100} + \frac{5}{1000}$$

4. **8.235** =
$$8 + \frac{2}{10} + \frac{3}{100} + \frac{5}{1000}$$

5. **8.208** =
$$8 + \frac{2}{10} + \frac{8}{1000}$$

6. **126.3** =
$$100 + 20 + 6 + \frac{3}{10}$$

7. **2.308** =
$$2 + \frac{3}{10} + \frac{8}{1000}$$

$$8. \quad 1.009 = 1 + \frac{9}{1000}$$

D. Convert into fractions.

1. **7.01** =
$$\frac{701}{100}$$

2. **6.35** =
$$\frac{635}{100}$$
 = $\frac{127}{20}$ 3. **4.005** = $\frac{4005}{1000}$ = $\frac{801}{200}$

3. **4.005** =
$$\frac{4005}{1000}$$
 = $\frac{801}{200}$

4. **68.7** =
$$\frac{687}{10}$$

5. **20.02** =
$$\frac{2002}{100}$$
 = $\frac{1001}{50}$

5. **20.02** =
$$\frac{2002}{100} = \frac{1001}{50}$$
 6. **5.706** = $\frac{5706}{1000} = \frac{2853}{500}$

7. **0.01** =
$$\frac{1}{100}$$

8. **0.008** =
$$\frac{8}{1000}$$
 = $\frac{1}{125}$

E. Convert into decimals:

1.
$$\frac{4}{10}$$
 = 0.04

$$2. \quad \frac{5}{100} = 0.05$$

$$3. \quad \frac{67}{100} = 0.67$$

$$4. \ \frac{36}{1000} = 0.036$$

$$5. \quad \frac{125}{100} = 1.25$$

6.
$$\frac{8}{100} = 0.08$$

$$7. \ \frac{378}{1000} = 0.378$$

8.
$$\frac{9}{10} = 0.9$$

F. Circle the unlike fractions.

G. Write the equivalent decimals.

1.
$$0.7 = 0.70 =$$
0.700

2.
$$1.5 = 1.50 = 1.500$$

3.
$$3.7 = 3.70 = 3.700$$

4.
$$\mathbf{0.5} = 0.50 = 0.500$$

Exercise 6.3

A. Fill in the blanks using <, > or =:

1. **54.7 35.7**

Compare the whole number part 54 > 35

So, 54.7 > 35.7

3. **5.8 8.5**

Compare the whole number part 5 < 8

So, 5.8 < 8.5

2. **19.075 19.75**

Convert into like decimals $19.075 \rightarrow 19.075$ and $19.75 \rightarrow 19.750$

As the whole number parts in 19.75 and 19.075 is

same, we compare the tenths digit.

$$\frac{0}{10}$$
 $<$ $\frac{7}{10}$, So, 19.075 $<$ 19.750

4. **6.03 6.003**

Convert into like decimals $6.03 \rightarrow 6.030$ and $6.003 \rightarrow 6.003$

As the whole number parts and tenths digits are same.

We compare the digit at hundredths place,

$$\frac{3}{100} > \frac{0}{100}$$
, So, 6.03 > 6.003

5. **9.10 9.1**

Convert into like decimals $9.10 \rightarrow 9.10$; and $9.1 \rightarrow 9.10$

As the whole number parts and tenths digits are same

So, 9.10 = 9.1

6. 7.003 7.03

Convert into like decimals $7.003 \rightarrow 7.003$; and $7.03 \rightarrow 7.030$

As the whole number parts and tenths digits are same.

We compare the digit at hundredths palace,

$$\frac{0}{100} \le \frac{3}{100}$$
, So, 7.003 < 7.03

B. Arrange the following decimals in the ascending order:

1. **0.42, 0.5, 0.382**

Convert into like decimals $0.42 \rightarrow 0.420~;~0.5 \rightarrow 0.500~;~\text{and}\\ 0.382 \rightarrow 0.382$ We compare the digit at tenths 0.382 < 0.420 < 0.500 or ; 0.382 < 0.42 < 0.5

3. **20.3**, **30.2**, **23.25**

Convert into like decimals $20.3 \rightarrow 20.30$, $30.2 \rightarrow 30.20$, and $23.25 \rightarrow 23.25$ We compare the whole number parts. 20.30 < 23.25 < 30.20 or ; 20.3 < 23.25 < 30.2

5. **11.42**, **10.4**, **11.526**

Convert into like decimals $11.42 \rightarrow 11.420$, $10.4 \rightarrow 10.400$ and $11.526 \rightarrow 11.526$ We compare the whole number parts and decimal parts. 10.400 < 11.420 < 11.526 or ; 10.4 < 11.42 < 11.526

2. **11.1, 11.21, 11.001**

Convert into like decimals $11.1 \rightarrow 11.100$; $11.21 \rightarrow 11.210$ and $11.001 \rightarrow 11.001$ As the whole number parts are same We compare the digit at tenths 11.001 < 11.100 < 11.210 or; 11.001 < 11.1 < 11.21

4. **9.82, 9.9, 9.795**

Convert into like decimals $9.82 \rightarrow 9.820, 9.9 \rightarrow 9.900, 9.795 \rightarrow 9.795$ As the whole number part are same. We compare the digit at tenths. 9.795 < 9.820 < 9.900 or ; 9.795 < 9.82 < 9.9

6. **8.86, 8.094, 8.9**

Convert into like decimals $8.86 \rightarrow 8.860$; $8.094 \rightarrow 8.094$; and $8.9 \rightarrow 8.900$ As the whole number part are same We compare the digit at tenths 8.094 < 8.860 < 8.900 or ; 8.094 < 8.86 < 8.9

Let's Do≣

Add or Subtract.

 2. 4 . 6 7 2 kg - 2 . 1 0 1 kg 2 . 5 7 1 kg 4. 2 9 9 10 ₹ 1 ♂ . ��� - ₹ 1 2 . 6 4 6 ₹ 0 0 . 3 5 4

Exercise 6.4

A. Add:

1. Add 0.275 and 0.425

1 1 0 . 2 7 5 + 0 . 4 2 5 0 . 7 0 0 2. Add 1.001, 1.92 and 0.00292

1 . 0 0 1 0 0 2 . 9 2 0 0 0 + 0 . 0 0 2 9 2 3 . 9 2 3 9 2 3. Add 38.505, 0.385 and 291.6765

 4. Add ₹17.80 + ₹15.50 + ₹85.96

		1	2		
	₹	1	7	8	0
	₹	1	5	5	0
+	₹		5	9	6
₹	1	1	9	2	6

7. 1.369 km + 7.28 km +6.093 km

		2	1		
	1	3	6	9	km
	7	2	8	0	km
+	6	0	9	3	km
1	4	7	4	2	km

5. ₹11.14 + ₹0.86 +

```
1 1
       1
 ₹11.14
 ₹00.86
+ ₹ 2 9 . 5 5
 ₹41.55
```

15.967 kg + 13.293 kg8. + 5.005 kg

	1	1	1	1		
	1	5	9	6	7	kg
	1	3	2	9	3	kg
+		5	0	0	5	kg
	3	4	2	6	5	kg

6. ₹29.55

```
1 1
    1
 7 . 6 5 m
19.15 m
 0 . 7 5 m
27.55 m
```

- B. Subtract:
 - 1. 56.813 – 27.303

₹18.95 – ₹15.86

63.125 L - 28.350 L

2. 9 - 7.473

37.750 km - 25.850 km5.

		6	17			
	3	7	7	5	0	km
_	2	5	8	5	0	km
	1	1	9	0	0	km

400 kg - 350.937 kg8.

7.65 m + 19.15 m +

 $0.75 \, \text{m}$

3. 15.963 - 13.89

			8	16	
	1	5	9	в	3
_	1	3	8	9	0
		2	0	7	3

6. 113 km – 14.101 km

> 1012 9 9 10 113.000 km - 1 4 . 1 0 1 km 98.899 km

C. Solve these story sums.

1. Cost of a tennis racket = ₹650.75 Cost of a box of six balls = ₹110.50

Cost of both = ₹(650.75 + 110.50)

= ₹761.25

So, the cost of both the items is ₹761.25

1 6 5 0 . 7 5 + 1 1 0 . 5 0 7 6 1 . 2 5

1

1 . 2 0 m

0 . 9 7 m

1.30 m

3 . 4 7 m

2. Distance covered in first jump by Mohan = 1.2 m

Distance covered in second jump by Mohan = 0.97 m

Distance covered in third jump by Mohan = 1.30 m

 \therefore Total distance covered by Mohan jumped = (1.2 + 0.97 + 1.30) m

 $= 3.47 \, \mathrm{m}$

Hence, Mohan jumped a total distance of 3.47 m.

3. Madhu had money = ₹100 Cost of base ball cap = ₹75.75

∴ Money left with her = ₹(100 – 75.75)

= ₹24.25

9 9 9 10 +&& . && - 7 5 . 7 5 2 4 . 2 5

Hence, ₹ 24.25 was left with Madhu.

4. Sonu had money = ₹55.50 He spent in market = ₹27

∴ Money left with him = ₹(55.50 - 27.00)

= ₹28.50

Hence, ₹28.50 was left with Sonu.

4 15 55.50 -27.00 28.50

Exercise 6.5

A. Multiply.

- 1. $6.25 \times 10 = 62.5 \leftarrow$ The decimal point has shifted 1 place to the right.
- 2. $3.835 \times 100 = 383.5 \leftarrow$ The decimal point has shifted 2 places to the right.
- 3. $28.625 \times 1000 = 28625 \leftarrow$ The decimal point has shifted 3 places to the right.
- 4. $0.2345 \times 100 = 23.45 \leftarrow$ The decimal point has shifted 2 places to the right.
- 5. $0.05 \times 1000 = 50 \leftarrow$ The decimal point has shifted 3 places to the right.
- 6. $19.098 \times 10 = 190.9 \leftarrow$ The decimal point has shifted 1 place to the right.
- 7. $1.098 \times 1000 = 1098 \leftarrow$ The decimal point has shifted 3 places to the right.
- 8. $0.0003 \times 100 = 0.03 \leftarrow$ The decimal point has shifted 2 places to the right.
- 9. $0.12 \times 10000 = 1200 \leftarrow$ The decimal point has shifted 4 places to the right.

B. Find the product.

1. **36.5 × 5**

We multiply as whole numbers ignoring the decimal point. Number of decimals places is 1.

Put the decimals after one place from the right.

So,
$$36.5 \times 5 = 182.5$$



1 1 1 1

2 2 2 2

99990

1 0 2 2 1 2

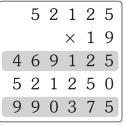
 \times 9 2

2. **5.2125** × **19**

We multiply as whole number ignoring decimal point. Number of decimal place is 4.

Put the decimal after 4 places from the right.

So,
$$5.2125 \times 19 = 99.0375$$



3. **11.11** × **92**

We multiply as whole number ignoring decimal point Number of decimal place is 2.

Put the decimal after 2 places from the right.

So,
$$11.11 \times 92 = 1022.12$$

4. 8.6×1.4

We multiply as whole number ignoring decimal point Number of decimal place is 1 + 1 = 2.

Put the decimal after two places from the right.

So,
$$8.6 \times 1.4 = 12.04$$

$\begin{array}{c} 8 & 6 \\ \times & 1 & 4 \\ 3 & 4 & 4 \\ 8 & 6 & 0 \\ 1 & 2 & 0 & 4 \end{array}$

5. 0.75×0.29

We multiply as whole number ignoring decimal point Number of decimal place is 2+2=4 Put the decimal after four places from the right So, $0.75\times0.29=0.2175$

6. 0.478×17.6

We multiply as whole number ignoring decimals point Number of decimal place is 3+1=4 Put the decimal after four places from the right So, $0.478\times17.6=8.4128$

7. 0.93×0.84

We multiply as whole number ignoring decimal point Number of decimal place is 2 + 2 = 4Put the decimal after four places from the right So, $0.93 \times 0.84 = 0.7812$

8. $11.11 \times 1.1 \times 0.1$

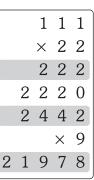
We multiply as whole number ignoring decimal point Number of decimal place is 2+1+1=4 Put the decimal after four places from the right So, $11.11\times1.1\times0.1=1.2221$

		4	7	8
	×	1	7	6
	2	8	6	8
3	3	4	6	0
4	7	8	0	0
8	4	1	2	8

	1	1	1	1
		×	1	1
	1	1	1	1
1	1	1	1	0
1	2	2	2	1
			×	1
1	2	2	2	1

9. $1.11 \times 2.2 \times 0.9$

We multiply as whole number ignoring decimal point Number of decimal place is 2 + 1 + 1 = 4Put the decimal after four places from the right So, $1.11 \times 2.2 \times 0.9 = 2.1978$



C. Solve:

Cost of a book ₹25.35 1. ₹25.35 × 45 Cost of 45 books =

> We multiply as whole number ignoring decimal point Number of decimal place is 2

Put the decimal after 2 places from the right ₹25.35 \times 45 = ₹1140.75 Thus, the cost of 45 books is ₹ 1140.75.

		2	5	3	5
			×	4	5
	1	2	6	7	5
1	0	1	4	0	0
1	1	4	0	7	5 5 0 5

2. Distance covered by bike in one hour 40.5 km $40.5 \text{ km} \times 18$ Distance covered by bike in 18 hours 729.0 km

Hence, the bike will cover 729 km of distance in 18 hours.

3. Cost of 1 L of petrol = ₹75.50

Cost of 4 L of petrol = ₹75.50 × 4 Hence, the cost of 4 L of petrol is ₹302.

	4	0	5
	×	1	8
3	2	4	0
4	0	5	0
7	2	9	0
$\overline{}$			

Exercise 6.6

 $0.1365 \div 2$

Divide.

1. $6.14 \div 5$

1	•	2	2	8
6		1	4	0
5				
1	1			
1	0			
	1	4		
_	1	0		
		4	0	
	_	4	0	·
			0	
	6 5 1	6 . 5 1 1 1 1 0	6 . 1 5 1 1 1 0 1 4 - 1 0	6 . 1 4 5 1 1 1 0 1 4 - 1 0 4 0 - 4 0

2.

 \therefore 6.14 ÷ 5 = 1.228

- $\therefore 0.1365 \div 2 = 0.06825$

0

- $91.89 \div 2$ 3.
 - 45.945 2)91.89 - 1 8 0 9 - 0 8 1 0 - 1 0 0
 - \therefore 91.89 ÷ 2 = 45.945

4.
$$0.153 \div 6$$

$$5. \quad 587.298 \div 15$$

		3	9		1	5	3	2
15)		5	8	7		2	9	8
	_	4	5					
		1	3	7				
_	_	1	3	5				
				2	2			
			_	1	5			
·-					7	9		
_				_	7	5		
						4	8	
					_	4	5	
							3	0
						_	3	0
								0
l								

6.
$$8.1 \div 8$$

$$\therefore 0.153 \div 3 = 0.0255$$

7.
$$72.93 \div 5$$

$$\therefore$$
 587.298 \div 15 = 39.1532

8.
$$45.7 \div 8$$

$$\begin{array}{r}
5 . 7 1 2 5 \\
8) 4 5 . 7 0 0 0 \\
-4 0 . \\
\hline
5 7 \\
-5 6 \\
\hline
1 0 \\
-0 8 \\
\hline
2 0 \\
-1 6 \\
\hline
4 0 \\
-4 0 \\
\hline
0
\end{array}$$

$$2 \therefore 8.1 \div 8 = 1.0125$$

9.
$$13.14 \div 12$$

$$\therefore 13.14 \div 12 = 1.095$$

$$\therefore$$
 72.93 ÷ 5 = 14.586

$$\therefore 45.7 \div 8 = 5.7125$$

B. Write the quotient.

$$5.$$
 8.75 ÷ **100** = 0.0875

6. $\mathbf{1.45 \div 100} = 0.0145$

7. $0.06 \div 1000 = 0.00006$

8. $\mathbf{3.71} \div \mathbf{1000} = 0.00371 \leftarrow$

9. $63.05 \div 100 = 0.6305 \leftarrow$

C. Divide.

1. **1.8** ÷ **0.2**

$$\frac{1.8}{0.2} = \frac{1.8 \times 10}{0.2 \times 10} = \frac{18}{2}$$

(We multiply by 10 since the divisor has only one place of decimal).

$$\therefore 1.8 \div 0.2 = 9$$

3. $6.25 \div 0.5$

$$\frac{6.25}{0.50} = \frac{6.25 \times 100}{0.50 \times 100} = \frac{625}{50}$$

(We multiply by 100 since the divisor has only two places of decimal)

$$\therefore 6.25 \div 0.50 = 12.5$$

5. $109.02 \div 2.3$

$$\frac{109.02}{2.3} = \frac{109.020 \times 10}{2.3 \times 10} = \frac{1090.2}{23}$$

(We multiply by 10 since the divisor has one place of decimal)

The decimal point has shifted 2 places to the left.

The decimal point has shifted 3 places to the left.

The decimal point has shifted 3 places to the left.

The decimal point has shifted 2 places to the left.

2. **6.4** ÷ **1.6**

 \leftarrow

$$\frac{6.4}{1.6} = \frac{6.4 \times 10}{1.6 \times 10} = \frac{64}{16}$$

(We multiply by 10 since the divisor has only one place of decimal).

$$\therefore 6.4 \div 1.6 = 4$$

4. $1.404 \div 0.108$

$$\frac{1.404}{0.108} = \frac{1.404 \times 1000}{0.108 \times 1000} = \frac{1404}{108}$$

(We multiply by 1000 since the divisor has only three places of decimal)

$$\therefore 1.404 \div 0.108 = 13$$

6. $210 \div 0.75$

$$\frac{210}{0.75} = \frac{210 \times 100}{0.75 \times 100} = \frac{21000}{75}$$

(We multiply by 100 since the divisor has two places of decimal)

$\overline{}$						
•			4	7		4
23) 1	0	9	0		2
_	- 9	2				
		1	7	0		
_	-	1	6	1		
					9	2
				_	9	2
						0

$$\therefore 109.02 \div 2.3 = 47.4$$

7. $25 \div 0.05$

$$\frac{25}{0.05} = \frac{25 \times 100}{0.05 \times 100} = \frac{2500}{5}$$

(We multiply by 100 since the divisor has two places of decimal)

$$25 \div 0.05 = 500$$

9. **22 ÷ 0.11**

$$\frac{22}{0.11} = \frac{22 \times 100}{0.11 \times 100} = \frac{2200}{11}$$

(We multiply by $100\ \mathrm{since}$ the divisor has two one places of decimal)

$$\therefore 22 \div 0.11 = 200$$

D. Solve the following:

Capacity of a juice bottle = 0.95 L Total quantity of juice to be filled = 12.350 L

 \therefore Number of bottle to be required = $12.350 \div 0.95$

$$\frac{12.350}{0.95} = \frac{12.350 \times 100}{0.95 \times 100} = \frac{1235}{95}$$

Hence, 13 bottles are required to filled the juice.

$$\therefore 210 \div 0.75 = 280$$

8. **12 ÷ 0.8**

$$\frac{12}{0.8} = \frac{12 \times 10}{0.8 \times 10} = \frac{120}{8}$$

(We multiply by 10 since the division has one place of decimal)

$$\therefore 12 \div 0.8 = 15$$

$$\therefore$$
 Total length of 13 pieces of rope= 95 cm \times 13

100 cm

 $(1235 \div 100) \text{ m}$

 \times 1 3 2 8 5

9 5

Hence, the total length of 13 pieces of rope is 12.35 m.

3. Distance coversed by train

242.04 km

6 hours

 $(242.04 \div 6) \text{ km/hr}$

$$=$$
 40.34 km/hr

Thus, the speed of the train is 40.34 km per hour.

			4	0		3	4	
6)	2	4	2		0	4	•
	_	2	4					
				2	0			
			_	1	8			
						2	4	
					_	2	4	
							0	

10TS QUESTION 📆

How many balloons of different colours are there in all? 10

Write as fraction, as decimal and as percentage for the number of

$$\frac{2}{10}$$
 , 0.2 , 20%

$$\frac{3}{10}$$
 , 0.3 , 30%

$$\frac{3}{10}$$
 , 0.3 , 30%

Yellow balloons

$$\frac{2}{10}$$
 , 0.2
 , 20%
 2. Red balloons
 $\frac{3}{10}$
 , 0.3
 , 30%

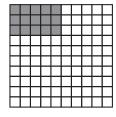
 Green balloons
 $\frac{3}{10}$
 , 0.3
 , 30%
 4. Pink balloons
 $\frac{2}{10}$
 , 0.2
 , 3%



Exercise 6.7

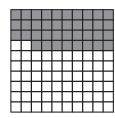
Α. What percentage of the square is shaded?

1.



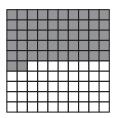
$$\frac{15}{100} = 15\%$$

2.



$$\frac{38}{100} = 38\%$$

3.



$$\frac{52}{100} = 52\%$$

Write the following fractions as percentage.

1.
$$\frac{3}{5}$$
 = $\frac{3}{5}$ × $\frac{100}{100}$ = $\frac{60}{100}$ = 60

1.
$$\frac{3}{5} = \frac{3}{5} \times \frac{100}{100} = \frac{60}{100} = 60\%$$
 2. $\frac{4}{10} = \frac{4}{10} \times \frac{100}{100} = \frac{40}{100} = 40\%$

3.
$$\frac{1}{2}$$
 = $\frac{1}{2}$ × $\frac{100}{100}$ = $\frac{50}{100}$ = 50%

3.
$$\frac{1}{2} = \frac{1}{2} \times \frac{100}{100} = \frac{50}{100} = 50\%$$
 4. $\frac{1}{4} = \frac{1}{4} \times \frac{100}{100} = \frac{25}{100} = 25\%$

Write the following percentage as fraction.

1. **45**% =
$$\frac{45}{100}$$
 = $\frac{9}{20}$

2. **35**% =
$$\frac{35}{100}$$
 = $\frac{7}{20}$

3. **60**% =
$$\frac{60}{100}$$
 = $\frac{3}{5}$

4. **85**% =
$$\frac{85}{100}$$
 = $\frac{17}{20}$

D. Write the following decimal fraction as percentage.

1. **0.85** =
$$\frac{85}{100}$$
 = 85%

0.85 =
$$\frac{85}{100}$$
 = 85% 2. **0.32** = $\frac{32}{100}$ = 32%

3. **0.43** =
$$\frac{43}{100}$$
 = 43%

4. **0.58** =
$$\frac{58}{1000}$$
 = $\frac{58}{10}$ × $\frac{1}{100}$ = 5.8 × $\frac{1}{100}$ = 5.8%

Write percentage as decimal fraction.

1. **35**% =
$$35 \times \frac{1}{100} = 0.35$$
 2. **83**% = $83 \times \frac{1}{100} =$

2. **83**% = 83
$$\times \frac{1}{100}$$
 = 0.83

3. **62**% = 62
$$\times \frac{1}{100}$$
 = 0.62 4. **26**% = 26 $\times \frac{1}{100}$ =

4. **26**% =
$$26 \times \frac{1}{100} = 0.26$$

Mental Maths Corner (MCQs)

Tick (\checkmark) the correct answer.

NEP Multiple Intellignece

Do it yourself.

Chapter

Simplification

Roll Back

Let's Do

A. Simplify these using the DMAS rule.

1.
$$12 \div 3 + 4$$

$$= 4 + 4$$

4. $9 \div 3 + 7 - 5$

= 5

= 3 + 7 - 5

= 10 - 5

2.
$$20 + 6 \div 2$$

5. $10 \div (8 \div 4) + 3$ $= 10 \div 2 + 3$

= 5 + 3

= 8

3.
$$15 \div 5 - 2$$

= $3 - 2$

6.
$$63 - 3 \times 21$$

$$= 63 - 63$$

$$= 0$$

Exercise 7.1

A. Simplify:

1.
$$20 + 16 \div 2$$

$$20 + 8 = 28$$

1. **20 + 16 ÷ 2** =
$$20 + 8 = 28$$
 2. $28 - 16 ÷ 4 = $28 - 4 = 24$$

$$28 - 4 = 24$$

3.
$$18 \div 3 - 2 = 6 - 2 = 4$$

$$6 - 2 = 4$$

4.
$$12 \div 4 + 2 = 3 + 2 = 5$$

$$3 + 2 = 5$$

5.
$$\frac{1}{2} \times \frac{1}{3} + \frac{1}{4} = \frac{1}{6} + \frac{1}{4}$$

$$= \frac{2+3}{12} = \frac{5}{12}$$
6. $\frac{3}{4} \times \frac{4}{9} - \frac{1}{8} = \frac{1}{3} - \frac{1}{8}$

$$= \frac{8-3}{24} = \frac{8}{24}$$

(LCM of 6 and 4 = 12)

7. **60** × **2** + **18** ÷ **2** - **43**
=
$$60 \times 2 + 9 - 43 = 120 + 9 - 43$$

= $129 - 43 = 86$

$$= 112 - 5 \times 10 = 112 - 50$$

 $112 - 45 \div 9 \times 10$

9.

11.
$$\frac{4}{7} - \frac{1}{7} \times \frac{2}{3} = \frac{4}{7} - \frac{2}{21}$$
$$= \frac{12-2}{21} = \frac{10}{21}$$

6.
$$\frac{3}{4} \times \frac{4}{9} - \frac{1}{8} = \frac{1}{3} - \frac{1}{8}$$

$$= \frac{8-3}{24} = \frac{5}{24}$$

(LCM of 3 and 8 = 24)

8.
$$56 \div 4 + 12 \times 2$$

= $14 + 12 \times 2$ = $14 + 24$
= 38

10.
$$\frac{3}{7} \div \frac{1}{14} \times \frac{1}{6} = \frac{3}{7} \times \frac{14}{1} \times \frac{1}{6} = \frac{2}{2}$$

$$= 1$$

12.
$$4\frac{1}{4} \div \frac{17}{16} + \frac{1}{2} = \frac{17}{4} \div \frac{17}{16} + \frac{1}{2}$$

$$= \frac{17}{4} \times \frac{16}{17} + \frac{1}{2}$$

$$= 4 + \frac{1}{2} = \frac{8+1}{2}$$

$$= \frac{9}{2} = 4\frac{1}{2}$$

B. Fill in the correct symbol +, -, \times or \div to make the sum correct.

- 1. $4 \times 3 + 2 = 14$
- 3. $15 \div 5 + 4 = 7$
- 5. $6 + 8 42 \div 6 = 7$

- 2. $6 \div 2 1 = 2$
- 4. $8 \times 3 6 \div 2 = 21$
- 6. $15 \times 4 + 24 \div 3 = 68$

Tricky Maths

Fill in the missing numbers.

- 1. $5 + 5 + (2 + 5 \times 4 \times 3) = 72$ Use the numbers: 2,5,3 and 4.
- $2. (7 + 3) \times 3 = 30$ Use the number: 3 and 7.

HOTS QUESTION 📆

$$(7 + 5) + 3 \times 2 \times 4 + (2 \times 1) = 38$$

Use the operations: \times , \times , \times , +, + and +

Exercise 7.2

A. Simplify using BODMAS rule:

- 1. $64 \div 16 \times (3 + 2)$
- 2. $\mathbf{3} + [\{(\mathbf{4} \div \mathbf{4}) +)\} \times \mathbf{8}]$

$$= 4 \times 5 = 20$$

$$= 3 + [\{1 + 1\} \times 8] = 3 + [2 \times 8]$$

$$= 3 + 16 = 19$$

3.
$$\{32 - (15 + 7)\} \times 2$$
 = $\{32 - 22\} \times 2$ = $10 \times 2 = 20$
4. $[32 + \{44 - (32 \div 4)\}]$ = $[32 + \{44 - 8\}]$ = $[32 + 36]$

5.
$$\{5 + (48 \div 12)\} - 2 \times 3$$
 = $\{5 + 4\} - 2 \times 3$ = $9 - 6 = 3$
6. $17 + [8 - \{5 + (10 \div 5)\}]$ = $17 + [8 - \{5 + 2\}]$ = $17 + [8 - 7]$ = 18

7.
$$\mathbf{40} \div (\mathbf{1} + \mathbf{6} - \mathbf{2}) + \mathbf{5}$$
 = $40 \div (1 + 4) + 5$ = $40 \div 5 + 5$ = $8 + 5 = 13$

8.
$$[\{\mathbf{66} - (\mathbf{13} + \mathbf{14})\} \div \mathbf{3}] + \mathbf{9}$$
 = $[\{\mathbf{66} - 27\} \div \mathbf{3}] + \mathbf{9}$ = $[\mathbf{39} \div \mathbf{3}] + \mathbf{9}$ = $[\mathbf{39} \div \mathbf{3}] + \mathbf{9}$

B. Simplify these and reduce your answer to the lowest terms.

1.
$$\frac{2}{5} + \left\{ \left(\frac{3}{10} \div \frac{1}{2} \right) - \frac{1}{2} \right\}$$
2. $35 + \left[6 + \left\{ 3 \left(18 \div \frac{9}{5} \right) \right\} \right]$

$$= \frac{2}{5} + \left\{ \left(\frac{3}{10} \times \frac{2}{1} \right) - \frac{1}{2} \right\}$$

$$= \frac{2}{5} + \left(\frac{3}{5} - \frac{1}{2} \right)$$

$$= \frac{2}{5} + \left(\frac{6 - 5}{10} \right)$$

$$= \frac{2}{5} + \frac{1}{10} = \frac{4 - 1}{10} = \frac{3}{10}$$
2. $35 + \left[6 + \left\{ 3 \left(18 \div \frac{9}{5} \right) \right\} \right]$

$$= 35 + \left[6 + \left\{ 3 \left(2 \times 5 \right) \right\} \right]$$

$$= 35 + \left[6 + \left\{ 3 \times 10 \right\} \right]$$

$$= 35 + \left[6 + 30 \right] = 35 + 36$$

$$= 71$$

3.
$$(5.6 + 2.4) \div (8.5 - 6.5) = 8 \div 2 = 4$$

$$4. \quad \frac{1}{2} + \left[2\frac{1}{4} - \left(\frac{1}{3} + \frac{1}{6} \right) \right]$$

$$= \frac{1}{2} + \left[\frac{9}{4} - \left(\frac{1}{3} + \frac{1}{6} \right) \right] = \frac{1}{2} + \left[\frac{9}{4} - \left(\frac{2+1}{6} \right) \right]$$

$$= \frac{1}{2} + \left[\frac{9}{4} - \frac{3}{6} \right] = \frac{1}{2} + \left[\frac{27-6}{12} \right]$$

$$= \frac{1}{2} + \frac{21}{12} = \frac{6+21}{12} = \frac{27}{12} = \frac{9}{4} = 2\frac{1}{4}$$

5. **21** +
$$\{6.01 + (1.38 - 0.99)\}$$
 = 21 + $\{6.01 + 0.39\}$ = 21 + 6.4 = 27.4

6.
$$\frac{13}{5} - \left[\frac{2}{5} + \left\{\frac{11}{4} - \left(\frac{3}{8} \div \frac{1}{2}\right)\right\}\right]$$

$$= \frac{13}{5} - \left[\frac{2}{5} + \left\{\frac{11}{4} - \left(\frac{3}{8} \times \frac{2}{1}\right)\right\}\right]$$

$$= \frac{13}{5} - \left[\frac{2}{5} + \left\{\frac{11}{4} - \frac{3}{4}\right\}\right] = \frac{13}{5} - \left[\frac{2}{5} + \left\{\frac{11-3}{4}\right\}\right]$$

$$= \frac{13}{5} - \left[\frac{2}{5} + \frac{8}{4}\right] = \frac{13}{5} - \left[\frac{2}{5} + 2\right]$$

$$= \frac{13}{5} - \left[\frac{2+10}{5}\right] = \frac{13}{5} - \frac{12}{5}$$

$$= \frac{13-12}{5} = \frac{1}{5}$$

7.
$$9 + \{20 - 3 \text{ of } 5 + (20 + 40 - 25 \div 5)\}\$$

= $9 + \{20 - 15 + (20 + 40 - 5)\}\$
= $9 + \{20 - 15 + (60 - 5)\}\$
= $9 + \{5 + 55\}\$
= $9 + 60 = 69$

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

1. (a)

2. (c)

3. (c)

Chapter

Money

Roll Back

Tick (\checkmark) the correct.

1. ₹21.05

2105 =

or

25 P

₹70.35

215 p or

2. 7035 P

₹7.35 =

or

or

735 p ₹25

25P

3. 5 coins of ₹5 ₹10

550 p

₹52 or or 250 p

or **(**\() or (\checkmark)

B. What is the cost of:

Cost of 10 pens = 30

Five 50-paise coins

 \therefore Cost of a pen = $\frac{30}{10}$ = $\frac{30}{10}$

- 2. Cost of 3 ice-creams = ₹99.90
 - ∴ Cost of an ice-cream = $\frac{99.90}{3}$ = ₹33.30
- 3. Cost of a balloon = ₹12.50
 - \therefore Cost of 5 balloons = $₹12.50 \times 5 = 62.50$
- 4. Cost of 1kg of apples ₹120
 - ∴ Cost of half a kg of apples = $₹ \frac{120}{2} = ₹60$

Let's Do

Fill in the blanks:

- 1. 3 erasers cost $\overline{12}$. $\overline{4}$ is the cost of 1 eraser.
- 2. If the cost of 5 L of milk is ₹125, the cost of 2 L milk will be ₹50.
- 3. If ₹36 is paid for 4 bananas, ₹72 will be paid for **8** bananas.
- 4. If 50 kg rice costs ₹1000, then for ₹500 we can buy **25 kg** rice.
- 5. 8 chocolates cost ₹40. **4** such chocolates will cost ₹20.

Exercise 8.1

A. Fill in the blanks:

- 1. 5 L of milk cost ₹150. The cost of 1 L of milk is ₹30 (₹150 ÷ 5).
- 2. The cost of 12 cricket bats is ₹ 1080. 1 cricket bat will cost ₹90 (₹1080 ÷ 12).
- 3. If 4 notebooks cost ₹ 60, the cost of a notebook is ₹ 15 (₹ 60 ÷ 4).
- 4. A dozen banana cost ₹ 36, so 1 banana cost ₹ 3 (₹ 36 ÷ 12).
- 5. 7 pens cost ₹ 49. So the cost of 1 pen will be ₹**7** (₹**49** ÷ **7**).

B. Solve these word problems.

1.	Cost of 7 books	=	₹910	2.	School fee for 4 months	=₹1260
	∴ Cost of 1 book	=	₹910 ÷ 7		∴ School fee for 1 month	=₹1260 ÷ 4
		=	₹130			=₹315
	So, Cost of 8 books	=	₹130 × 8		So, School fee for 12 months	=₹315 × 12
		=	₹1040.			=₹3780
3.	Cost of 10 kg of sugar	=	₹185	4.	Cost of 11 washing machines	=₹66000
	∴ Cost of 1 kg of sugar	=	₹185 ÷ 10		∴ Cost of 1 washing machine	=₹66000 ÷11
		=	₹18.5			=₹6000
	So, Cost of 8 kg of sugar	=	₹18.5 × 8		So, Cost of 6 washing machine	s=₹6000×6

∴ Cost of 1 pencil = ₹26 ÷ 10 Selling price of 5 kg of mangoes = ₹200

$$= ₹2.6$$
So, Cost of 4 pencils
$$= ₹2.6 × 4$$

$$= ₹10.4$$

Second fruit seller:

Selling price of 3 kg of mangoes = 126 ∴ Selling price of 1 kg of mangoes = ₹126÷3 = ₹42

So I should buy the mangoes from the first fruit seller.

Exercise 8.2

A. Find Mr. Khan's profit or loss on each item he sold as given.

S.No.	Item	Cost Price (₹)	Selling Price (₹)	Formula	Profit	Loss
1.	Pen	8.00	10.00	Profit = SP – CP Profit = ₹ $(10 - 8)$ = ₹2	₹2	_
2.	Bread	12.00	15.00	Profit = SP – CP Profit = ₹(15 – 12) = ₹3	₹3	
3.	Soap	7.00	6.00	Loss = CP – SP Loss = ₹ $(7 - 6) = ₹1$		₹1
4.	Pencil	3.00	3.50	Profit = SP – CP Profit = ₹ $(3.50 - 3.00)$ = ₹ 0.50	₹0.50	_
5.	Chocolate	17.00	19.50	Profit = SP – CP Profit = ₹(19.50 – 17) = ₹2.50	₹2.50	_
6.	Gum	6.50	5.00	Loss = $CP - SP$ Loss = $₹(6.50 - 5.00) = ₹1.50$	₹1.50	1.50

B. Find the selling price.

S.No.	Cost Price (₹)	Price (₹)	Loss (₹)	Formula	Selling Price (₹)
1.	9.00	2.00		SP = CP + Profit SP = ₹(9.00 + 2.00) = ₹11.00	₹11.00
2.	8.00	1.50	_	SP = CP + Profit SP = ₹(8.00 + 1.50) = ₹9.50	₹9.50
3.	10.00	_	1.25	SP = CP - Loss SP = ₹(10.00 - 1.25) = ₹8.75	₹8.75

4.	38.00	_	3.50	SP = CP - Loss SP = ₹(38.00 - 3.50) = ₹34.50	₹34.5
5.	27.50	3.50	_	SP = CP + Profit SP = ₹(27.50 + 3.50) = ₹31.00	₹31.00
6.	37.00	2.50	_	SP = CP + Profit SP = ₹(37.00 + 2.50) = ₹39.50	₹39.50

C. Find the cost price.

S.No.	Selling Price (₹)	Profit (₹)	Loss (₹)	Formula	Cost Price (₹)
1.	1,870	154	_	CP = SP - Profit CP = ₹(1870 - 154) = ₹1716	₹1716
2.	147	_	35	CP = SP + Loss CP = ₹(147 + 35) = ₹182	₹182
3.	975	225	_	CP = SP - Profit CP = ₹(975 - 225) = ₹750	₹750
4.	1,132		268	CP = SP + Loss CP = ₹(1132 + 268) = ₹1400	₹1400
5.	8,720	340		CP = SP - Profit CP = ₹(8720-340) = ₹8380	₹8380
6.	1,060	_	150	CP = SP + Loss CP = ₹(1060 + 150) = ₹1210	₹1210

D. Solve these problems :

Cost price of mobile phone	=	₹2675		
Selling price of mobile phone	=	₹3629		
∴ Profit	=	Selling price – Cost price		
So, Profit of Dhiraj	=	₹(3629 – 2675)	=	₹954
Cost price of a pen	=	₹17.50		
Selling price of pen	=	₹22		
∴ Profit	=	Selling price – Cost price		
So, Profit of Anil	=	₹(22 – 17.50)	=	₹4.50
Cost price of fan	=	₹725.00		
Loss	=	₹50		
∴ Selling price	=	Cost price – Loss		
So, Selling price of fan	=	₹(725 – 50)	=	₹675
	Selling price of mobile phone ∴ Profit So, Profit of Dhiraj Cost price of a pen Selling price of pen ∴ Profit So, Profit of Anil Cost price of fan Loss ∴ Selling price	Selling price of mobile phone ∴ Profit So, Profit of Dhiraj Cost price of a pen Selling price of pen ∴ Profit So, Profit of Anil Cost price of fan Loss ∴ Selling price = Selling price = ∴ Selling price = ∴ Selling price	Selling price of mobile phone $=$ ₹3629 ∴ Profit $=$ Selling price – Cost price So, Profit of Dhiraj $=$ ₹(3629 – 2675) Cost price of a pen $=$ ₹17.50 Selling price of pen $=$ ₹22 ∴ Profit $=$ Selling price – Cost price So, Profit of Anil $=$ ₹(22 – 17.50) Cost price of fan $=$ ₹725.00 Loss $=$ ₹50 ∴ Selling price — Cost price – Loss	Selling price of mobile phone $=$ ₹3629 ∴ Profit $=$ Selling price – Cost price So, Profit of Dhiraj $=$ ₹(3629 – 2675) $=$ Cost price of a pen $=$ ₹17.50 Selling price of pen $=$ ₹22 ∴ Profit $=$ Selling price – Cost price So, Profit of Anil $=$ ₹(22 – 17.50) $=$ Cost price of fan $=$ ₹725.00 Loss $=$ ₹50 ∴ Selling price $=$ Cost price – Loss

MATHEMATICS-5

4. Selling price of a book = ₹360 Profit = ₹85

∴ Cost price = Selling price – Profit

So, Cost price of book = ₹(360 - 85) = ₹275

5. Cost price of a radio = ₹740 Loss = ₹95

∴ Selling price = Cost price – Loss

So, Selling price of radio = (740 - 95) = 645

6. Cost price of a cycle = ₹695 Profit = ₹125

∴ Selling price = Cost price + Profit

So, Selling price of cycle = ₹(695 + 125) = ₹820



1. Number of rose flowers in each bunch = 10

Flowers in 20 bunches = $20 \times 10 = 200$ Selling price of flower = $₹200 \times 10 = ₹2000$

Cost price of flower = ₹1200

∴ Profit of florist = Selling price - Cost price = ₹(2000 - 1200)

= ₹800

2. Cost price of 12 drawing sheets = ₹27

Cost price of 1 drawing sheet = $(27 \div 12)$ = (2.25)

(1 score = 20 items)

Cost price of 20 drawing sheets = $₹(2.25 \times 20)$ = ₹45

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (a) 2. (c) 3. (d)

NEP The 4Cs: Core Learning Skills

Suppose you sell all these articles at a flat price of $\stackrel{>}{\sim} 100/$ -in a bargain sale. What is your profit or less on each article?

S. N0.	Name of the article	СР	SP	Profit/Loss
1.	Football	₹40	₹100	₹60 profit
2.	Toy car	₹60	₹100	₹40 profit
3.	Lunch Box	₹80	₹100	₹20 profit

4.	Chair	₹100	₹100	₹0 No profit & Loss
5.	Calculator	₹120	₹100	₹20 Loss
6.	Book	₹150	₹100	₹50 Loss

What is your overall profit or loss?

Chapter 9

Simple Interest

Exercise 9

A. Fill in the blanks.

S.No.	Principal	Rate of Interest	Time of deposit	Interest $I = \frac{P \times R \times T}{100}$	Amount A = P + I
1.	₹2500	10%	5 years	$I = \frac{2500 \times 10 \times 5}{100}$ $= 1250$	A = ₹(2500 + 1250) $A = ₹3750$
2.	₹560	8%	10 years	I = ₹560 × 8 × 10 100 = ₹448	A = ₹(560 + 448) $A = ₹1008$
3.	₹1800	5%	2 years	I = ₹1800 × 5 × 2 100 = ₹180	A = ₹(1800 + 180) $A = ₹1980$
4.	₹15000	11%	2 years	I = ₹15000 × 11 × 2 100 = ₹3300	A = ₹(15000 + 3300) $A = ₹18300$
5.	₹6500	12%	3 years	I = ₹6500 × 12 × 3 100 = ₹2340	A = ₹(6500 + 2340) $A = ₹8840$

MATHEMATICS-5

B. Find the interest and amount for 1 year when the principal and rate of interest are given to you.

1.
$$P = 200$$
, $R = 5\%$, $T = 1$ years

2.
$$P = 7500$$
, $R = 7\%$, $T = 1$ year

 $I = \frac{P \times R \times T}{100}$

$$I = \frac{P \times R \times T}{100}$$

$$I = \sqrt{200 \times 5 \times 1} = \sqrt{100}$$

$$A = P + I = ₹(1500 + 105)$$

= ₹1605

 $I = \underbrace{1500 \times 7 \times 1}_{100} = \underbrace{1500}$

3.
$$P = 72800$$
, $R = 10\%$, $T = 1$ year 4. $P = 10000$, $R = 3\%$, $T = 1$ year

$$I = \frac{P \times R \times T}{100}$$

$$I = \overline{\uparrow} \frac{2800 \times 10 \times 1}{100} = \overline{\uparrow} 280$$

$$A = P + I = ₹(2800 + 280)$$

= ₹3080

$$I = \frac{P \times R \times T}{100}$$

$$I = \overline{\epsilon} \frac{10000 \times 3 \times 1}{100} = \overline{\epsilon}300$$

5. P = 14000, R = 8%, T = 1 year

I =
$$\frac{P \times R \times T}{100}$$
 = $\frac{\text{₹ } 14000 \times 8 \times 1}{100}$ = ₹ 1120

$$A = P + I = ₹ 14000 + ₹ 1120 = ₹ 15120$$

6. P = ₹2500, R = 12%, T = 1 year

$$I = \frac{P \times R \times T}{100} = ₹\frac{2500 \times 12 \times 1}{100} = ₹300$$

$$A = P + I = ₹(2500 + 300) = ₹2800$$

C. Find the interest and the amount when.

1. P = 750, R = 5%, $T = 2 \frac{1}{2}$ years $= \frac{5}{2}$ years

$$I = \frac{P \times R \times T}{100} = \frac{750 \times 5 \times 5}{100 \times 2} = ₹93.75$$

$$A = P + I = ₹(750 + 93.75) = ₹843.75$$

2.
$$P = ₹1000$$
, $R = 2\frac{1}{2}$ % = $\frac{5}{2}$ %, $T = 3$ years

$$I = \frac{P \times R \times T}{100} = \frac{2 \times 1000 \times 5 \times 3}{2 \times 100} = 75$$

A. =
$$P - I$$
 = $(1000 + 75)$ = (1075)

3.
$$P = \sqrt[3]{2500}$$
, $R = 12 \frac{1}{2} \% = \frac{25}{2} \%$, $T = 10$ year

$$I = \frac{P \times R \times T}{100} = \frac{2500 \times 25 \times 10}{2 \times 100} = 3125$$

$$A = P + I = ₹(2500 + 3125) = ₹ 5625$$

4. P = ₹15000, R = 5%, T =
$$7\frac{1}{2}$$
 years = $\frac{15}{2}$ years

$$I = \frac{P \times R \times T}{100} = \frac{75625}{2 \times 100} = 75625$$

$$A = P + I = ₹(15000 + 5625) = ₹20625$$

5.
$$P = ₹5000$$
, $R = 10\%$, $T = 3\frac{1}{2}$ years $= \frac{7}{2}$ years

$$I = \frac{P \times R \times T}{100} = \frac{5000 \times 10 \times 7}{100 \times 2} = 71750$$

$$A = P + I = ₹(5000 + 1750) = ₹6750$$

6.
$$P = ₹10000$$
; $R = 6 \frac{1}{2} \% = \frac{13}{2} \%$, $T = 4$ years

I =
$$\frac{P \times R \times T}{100}$$
 = $\frac{₹10000 \times 13 \times 4}{100 \times 2}$ = ₹2600
A = P + I = ₹(10000 + 2600) = ₹12600

353

D. Solve these problems.

1. Principal (P) = 3500; T = 3 years; R = 7%

$$I = \frac{P \times R \times T}{100} = \frac{3500 \times 7 \times 3}{100} = 735$$

Hence, Mrs Kaul will get ₹735 after 3 years.

2. Principal = ₹4500; R = 12%, T = 5 years

$$I = \frac{P \times R \times T}{100} = \frac{34500 \times 12 \times 5}{100} = 32700$$

$$A = P + I = ₹(4500 + 2700) = ₹7200$$

Hence, Michael will repay ₹7200 at the end of 5 years.

3. Principal = 12000; T = 5 years; $R = 6\frac{1}{2}$ % = $\frac{13}{2}$ %

∴ Simple Interest =
$$\frac{P \times R \times T}{100}$$
 = $\frac{2 \times 12000 \times 13 \times 5}{2 \times 100}$

$$=$$
 ₹(60 × 65) $=$ ₹ 3900

4. P = 70000, T = 6 years, R = 11%

I =
$$\frac{P \times R \times T}{100}$$
 = $\frac{₹70000 \times 11 \times 6}{100}$ = ₹46200

Hence, Arvind will have to pay ₹46,200.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (d)

2. (a)

3. (c)

Worksheet

Find the total amount at the end of the year.

Total Deposited − Total withdraw =
$$₹(4000 + 1560 + 235.50) - ₹(1376 + 1500)$$

= $₹5795.50 - ₹2876$ = $₹2919.50$

Calculate the simple interest at the rate of 5% p.a.

Principal = ₹(2919.5 – 235.5) = ₹2684

∴ Simple interest =
$$\frac{P \times R \times T}{100}$$
 = $\frac{2684 \times 5 \times 1}{100}$ = ₹134.20

Calculate the amount at the end of the year.

Time and Temperature

Roll Back

What is Prakhar's everyday routine? Draw hands on the clock and write the time in a.m.



7.30 a.m.



8.30 a.m.



2.00 p.m.



6.00 p.m.



10.00 p.m.

Fill in the blanks.

- 1. 3:30 p.m. is written as **1530 hours** in the 24 hour clock.
- 2. 2 hours before midnight is 10:00 p.m..
- 3. 0025 hours is written as **12**: **25** a.m. in the 12 hour clock.
- 4. 2 hours before 12 noon is 10 : 00 **a.m.**.
- 5. There are **30** number of days between December 12 and January 11 (do not include January 11).
- 6. There are **57** number of days between March 23 and May 18 (include May 18).

L∈t's Do≡

Change into minutes.

 $= (2 \times 60) \text{ mins}$ 2 hrs

= 120 mins

2. 9 hrs

 $= (9 \times 60) \text{ mins} =$

540 mins

3. 6 hrs 6 mins Change into seconds.

9 mins

 $= (9 \times 60)_{\text{secs}}$

= 540 Secs

2. 13 mins

 $= (13 \times 60)$

780 Secs

3. 8 mins 13 secs

 $= 8 \times 60 + 13 \text{ Secs} = (480 + 13) \text{ secs} = 493 \text{ mins}$

 $= (6 \times 60 + 6) \text{ mins} = 366 \text{ mins}$

L∈t's Do≣

Change into hours and minutes.

1. 310 min

310 min convert into hours and minutes.

60) 310 (5

2. 500 min

500 min convert into hours and minutes.

60)500(8

3. 670 min

670 min convert into hours and minutes.

60)670(11

5 hours 10 minutes.

8 hours 20 minutes.

11 hours 10 minutes.

B. Change into minutes and seconds.

1. 400 sec

2. 920 sec

3. 1010 sec

 $\begin{array}{r}
60 \overline{\smash{\big)}\ 1010 (16)} \\
\underline{-60} \\
410 \\
\underline{-360} \\
\underline{50}
\end{array}$

- = $6 \min 40 \sec$
- = 15 min 20 sec
- = $16 \min 50 \sec$

Exercise 10.1

A. Change into minutes

- 1. **5 hours** (:1 hour = 60 minutes) \therefore 5 hours = $(60 \times 5) = 300$ minutes
- 2. **7 hours** (:1 hours = 60 minutes) :. 7 hours = $(60 \times 7) = 420$ minutes
- 3. **6 hours 40 minutes** (∵1hour = 60 minutes)
 - \therefore 6 hours 40 minutes = (6×60) min + 40 min = (360 + 40) min = 400 min
- 4. **19 hours 10 minutes** (\because 1 hours = 60 minutes)
 - 19 hours 10 minutes = $(19 \times 60) \min + 10 \min = 1140 \min + 10 \min$
 - = 1150 min
- 5. **11** $\frac{1}{2}$ **hours** = $\frac{23}{2} \times 60$ minutes = (23×30) min = 690 minutes
- 6. **13.5 hours** = $\frac{135}{10} \times 60$ minutes = (135×6) min = 810 minutes

B. Change into seconds:

- 1. **13 minutes** $(\because 1 \text{ minutes}) = 60 \text{ seconds}$
 - \therefore 13 minutes = (60×13) seconds = 780 seconds
- 2. **59 minutes** (:1 minutes) = 60 seconds)
 - \therefore 59 minutes = (60×59) seconds = 3540 seconds
- 3. **14 minutes 40 seconds** (\because 1 minutes = 60 seconds)
 - $\therefore 14 \min 40 \sec = (14 \times 60) \sec + 40 \sec$
 - = $(840 + 40) \sec = 880 \sec$
- 4. **66 minutes 13 seconds** $(\because 1 \text{ min}) = 60 \text{ sec})$
 - $\therefore 66 \min 13 \sec = (66 \times 60) \sec + 13 \sec$
 - = $(3960 + 13) \sec = 3973 \sec$
- 5. **5 minutes** $(\because 1 \text{ min} = 60 \text{ sec})$
 - $\therefore 5 \frac{1}{2} \min = (5 \times 60) + 60 \times 1/2 \sec$
 - = 300 + 30 sec = 330 sec
- 6. **9.5 minutes** $(\because 1 \text{ min} = 60 \text{ sec})$
 - $\therefore 9.5 \text{ min} = (9.5 \times 60) \text{ sec} = 570 \text{ sec}$

C. Convert into hours and minutes:

1. **600** minutes

(: 1 hour = 60 minutes)

2. **840** minutes

(:: 1 hour = 60 minutes)

3. **108 minutes**

(: 1 hour = 60 minutes)

$$\therefore$$
 600 minute = 10 hours.

 \therefore 840 minutes = 14 hours

 \therefore 108 minutes = 1 hour 48 mins

4. **788** minutes

(: 1 hour = 60 minutes)

(: 1 hour = 60 minutes)

6. **1000 minutes**

(: 1 hour = 60 minutes)

= 13 hours 8 min

∴ 520 minutes

= 8 hours 40 min

∴ 1000 minutes

= 16 hours 40 min

D. Convert into minutes and seconds:

1. **360 seconds**

(:: 1 minute = 60 seconds)

: 360 seconds

= 6 minutes

4. **381** seconds

 $(:: 1 \min = 60 \text{ sec})$

$$\begin{array}{c}
60 \overline{\smash{\big)}\,3\,\,8\,\,1\,\,(6)} \\
-\,\underline{3\,\,6\,\,0} \\
2\,\,1
\end{array}$$

2. **1800** seconds

(:: 1 minute = 60 seconds)

: 1800 seconds

= 30 minutes

5. **2406 seconds**

 $(:: 1 \min = 60 \text{ sec})$

3. **225 seconds**

(:: 1 minute = 60 seconds)

∴ 225 seconds

= 3 min 45 sec

6. **1760 seconds**

 $(:: 1 \min = 60 \text{ sec})$

$$\therefore$$
 381 sec = 6 min 21 sec

$$\therefore$$
 2406 sec = 40 min 6 sec

$$\therefore$$
 1760 sec = 29 min 20 sec

Convert into hours: E.

1. 4 days

- $= 4 \times 24$ hours 4 days
- (: 1 days = 24 hours)
- = 96 hours

2. 7 days

- $= 7 \times 24 \text{ hours}$ 7 days
- (: 1 days = 24 hours)

=

3.

= 168 hours

- 3. 18 days 18 days
- $18 \times 24 \text{ hours} = 432 \text{ hours}$ (: 1 day = 24 hours)=432 hours

4.
$$5\frac{1}{2}$$
 days

- $5\frac{1}{2}$ days = $5 \times 24 + 1/2 \times 24$ hours (: 1 day = 24 hours)
- 120 + 12 hours

132 hours

5. 9.5 days $9.5 \, \text{days} = 9.5 \times 24 \, \text{hours}$

228 hours

6. 28.5 days

 $28.5 \text{ days} = 28.5 \times 24 \text{ hours}$

684 hours

F. **Convert:**

636 minute into hours 1. and minutes

$$(:: 1 \text{ hour} = 60 \text{ min})$$

2. 360 seconds into minutes and seconds

$$(:: 1 \min = 60 \text{ sec})$$

days and hours (:: 1 day = 24 hours)

55 hours into

- \therefore 636 mins = 10 hours 36 min
- \therefore 360 secs = 6 mins
- ∴ 55 hours

765 days into years and days

$$(:: 1 \text{ year} = 365 \text{ days})$$

5. 54 months into years and months

$$(:: 1 \text{ year} = 12 \text{ months})$$

6. 96 weeks into months

$$(:: 1 \text{ month} = 4 \text{ weeks})$$

2 days 7 hours

- ∴ 765 days
- 2 years 35 days
- : 54 months
- 4 years 6 months
- : 96 weeks
- = 24 months

G. Solve the following story sums:

- Time duration of an advertisement
- 30 sec
- Total duration of advertisement in 1 day
- 300 sec
- .: Number of Advertisement shown
- $(300 \div 30) = 10 \text{ times}$
- Thus, the advertisement shown in 10 times in a day.
- 2. Number of words type in a minute
- 80 words

80 words type

in 60 seconds

∴ 1 word type

- in $\frac{60}{80} = \frac{3}{4}$ seconds
- Hence, the typist type one word in $\frac{3}{4}$ seconds.

3. $2\frac{1}{2}$ hours convert into minutes

(: 1 hour = 60 minutes)

$$\therefore 2 \frac{1}{2} \text{ hours} = 2 \times 60 + 60 \times \frac{1}{2} \text{ minutes}$$

= 120 + 30 minutes = 150 minutes

So, $2\frac{1}{2}$ hours equal to 150 minutes.

4. Time taken to covered 3 km = 1 hour or 60 min

So, time take to covered 1 km =
$$\frac{60}{3}$$
 min = 20 min

So, the person walks 1 km in 20 minutes.

Exercise 10.2

A. Add:

1. Add minutes = 45 + 25 = 70 min = 60 min + 10 min

1 hr 10 min

Add hours = (40 + 25 + 1) hr = 66 hr

 \therefore Sum = 66 hr 10 min.

2. Add seconds = 35 + 40 = 75 sec = 60 sec + 15 sec

↓
1 min 15 sec
49 minutes

Add minutes = 18 + 30 + 1 = 40 minutes 15 accorde

 \therefore Sum = 49 minutes 15 seconds.

3. Add seconds = (37 + 38) = 75 sec = (60 + 15) sec

	Но	urs	M	in	
		1			
	4	0	4	5	
+	2	5	2	5	
	6 6		1	0	

	Min		Sec	
	1	8	3	5
+	3	0	4	0
	4	9	1	5

Min

0

0

Sec

5

3 7

3 8

Hr

Add minutes =
$$40 + 27 + 1 \text{ min}$$
 = 68 minutes 60 min + 8 min

1 hours 8 min

Add hours
$$= 1 + 6 + 3 = 10 \text{ hour}$$

Sum = 10 hours 8 min 15 sec.

4. Add: 35 minutes 26 seconds and 42 minutes 52 seconds

Add seconds =
$$(26 + 52)$$
 sec = 78 sec

$$\downarrow \\
(60 + 18) \sec \\
\downarrow$$

1 min 18 sec

Add minutes = $(35 + 42 + 1) \min$ = $78 \min$ \downarrow $(60 + 18) \min$ \downarrow \downarrow 1 hours 18 min

 \therefore Sum = 1 hours 18 minutes 18 seconds.

5. Add: 12 hours 54 minutes and 7 hours 43 minutes

Add minutes = (54 + 43) min = 97 min \downarrow (60 + 37) min \downarrow \downarrow 1 hours 37 min

Add hours = (12 + 7 + 1) hours = 20 hours

 \therefore Sum = 20 hours 37 min.

6. 12 years 6 months and 3 years 9 months

Add months = (6 + 9) months = 15 months \downarrow \downarrow \downarrow \downarrow \downarrow 1 year 3 months

Add year = (12 + 3 + 1) years = 16 years

 \therefore Sum = 16 years 3 months.

B. Subtract.

1. Subtract minutes = 0 < 3, Borrow 1 hours = 1 × 60 + 0 = 60 minutes = 60 - 37 = 23 minutes

Subtract hours = (40-1)-32= (39-32) hours = 7 hours

 \therefore Difference = 7 hours 23 minutes.

2. Subtract seconds = 10 < 29, Borrow 1 min = $1 \times 60 + 10$ = 70= (70 - 29) sec = 41 sec

Subtract minutes = (62-1)-45 min = (61-45) min = 16 min

 $\begin{array}{ll} = & (61 - 45) \text{ min} \\ \therefore \text{ Difference} & = & 16 \text{ min } 41 \text{ sec.} \end{array}$

3. Subtract months = 5 < 10; Borrow 1 year

 $\therefore (1 \text{ year} = 12 \text{ month})$

 $= 1 \times 12 + 5 = 17 \text{ months}$ = (17 - 10) months = 7 months

Subtract year = (49-1)-29 years

= 48 – 29 years = 19 years

:. Difference = 19 years 7 months.

Hr	Min
3 9	6 0
4 8	& &
- 3 2	3 7
7	2 3

	Min		Sec	
	6	1	7 0	
	6	2	10	
_	4	5	2 9	
	1	6	4 1	

Ye	ear	Month	
4	8	1	7
4	9		5
- 2	9	1	0
1	9		7

4. Subtract: 42 minutes 38 seconds from 50 minutes 17 seconds

Subtract seconds = 17 < 38; Borrow 1 min

 $(: 1 \min = 60 \text{ sec})$

 $= 1 \times 60 + 17 = 77 \text{ sec}$

= $(77-38) \sec = 39 \sec$

Subtract minutes = (50-1)-42 minutes

= 49 – 42 minutes = 7 minutes

 \therefore Difference = 7 minutes 39 seconds.

Min Sec 4 9 7 7 5 8 7 3 9

5. Subtract: 13 hours 28 minutes from 16 hours 12 minutes

Subtract minutes = 12 < 28; Borrow 1 hour

(:: 1 hour = 60 min)

= $(1 \times 60 + 12) \text{ min } = 72 \text{ min}$

(72 - 28) min = 44 min

= (72 - 28) minSubtract hours = (16 - 1) - 13 hours

= 15 – 13 hours = 2 hours

 \therefore Difference = 2 hours 44 min.

Hr Min 1 5 7 2 2 4 8 2 - 1 3 2 8 2 4 4

6. Subtract: 15 years 9 months from 18 years 5 months.

Subtract months = 5 < 9; Borrow

(: 1 year = 12 months)

 $= (1 \times 12 + 5) \text{ months} = 17 \text{ months}$

= 17 months - 9 months = 8 months

Subtract years = (18-1)-15 years

= 17 – 15 years = 2 years

 \therefore Difference = 2 years 8 months.

	Ye	Month	
	1	7	17)
	7	8	5
_	1	5	9
		2	8

C. Solve the following story sums.

1. Rohit studies = 2 hours 15 minutes Ankit studies = 1 hour 45 minutes

∴ Difference in time = 2 hours 15 minutes – 1 hour 45 minutes

Subtract minutes = 15 < 45;

borrow = 1 hours (:: 1 hours = 60 min)

 $1 \times 60 + 15 = 60 + 15 = 75 \text{ min}$

 $75 \min - 45 \min = 30 \min$

Subtract hours (1-1) hours = 0 hours

Hence, Rohit studies 30 minutes more than Ankit.

2. Time taken to covered a distance by express train = 7 hours 25 minutes

Time taken to covered a distance by super fast train = 5 hours 45 minutes

If we travel super fast train than

We have time save = 7 hours 25 minutes - 5 hours 45 minutes

Subtract minutes = 25 < 45

= $1 \times 60 + 25$ minutes = 85 minutes = 40 minutes

Subtract hours = (7-1)-5 hours = 6-5 hours

= 1 hours

Thus, we will save 1 hour 40 min, if we travel by the super fast train.

	Hr	M	in
	1	7	5
	2	4	5
_	1	4	5
		3	0

2 hours 15 minutes 3. Mona studies in morning

1 hour 50 minutes Mona studies in evening

.. She study in a day 2 hours 15 minutes + 1 hour 15 minutes

Hence, Mona studies 4 hours 5 minutes in a day.

Mayank studied in Bangalore

Mayank worked in Mumbai

.. Time period of Mayank left his home Add months

4 years 6 months

5 years 10 months

4 years 6 months + 5 years 10 months

(6 + 10) months

16 months 12 months + 4 months

1 year + 4 month

1 year 4 months

(4 + 5 + 1) years

10 years

1

Year

4

5

Hence, Mayank stayed away from his home town for 10 years 4 months.

5. Saurabh's age 7 years 9 months

> ∴ Zoya's age 7 year 9 months + 1 year 6 months

Add of months 9 + 6= 15 months

= 12 months + 3 months

= 1 year + 3 months

Add of years (1 + 7 + 1) years = 9 years

Thus, Zoya's age is 9 years 3 months.

	Year	Month
	1	
	7	9
+	1	6
	9	3

Hr

1

2

1

4

Min

5

0 5

Month

6

0 1

4

5 1

0

Tricky Maths

Write + or - in the correct

Add years

Starting date + Duration = Finishing date.

Finishing data - Duration = Starting date

HOTS QUESTION

2012 was a leap year.

And Extra day in a leap year = 29 th February

Hence, the birthdays of Simran and Sanjay are on 28th February and 1st March.

Exercise 10.3

Find the duration of time:

8:10 am to 1:40 pm

We change the give time according to 24-hour clock and then subtract.

2. 9:10 am to 4:50 pm

> We change the given time according to 24-hour clock and then subtract.

	Hours		Min	utes
	1	3	4	0
_		8	1	0
		5	3	0

	Hours		Min	utes
	1	6	5	0
_		9	1	0
		7	4	0

8:10 am= 0810 hours = 1340 hours 1:40 pm

9:10 am4:50 pm

= 0910 hours = 1650 hours

.: Time duration = 5 hours 30 minutes. \therefore Time duration = 7 hours 40 minutes.

3. **8:45 pm to 12:00 Noon**

8:45 pm = 2045 hours

Time duration from 8:45 p.m. to 12:00 midnight = 3 hours 15 minutes

 \therefore Time duration from 8:45 p.m. to 12:00 moon = (12 + 8) hours +

- 2 4 5 0

15 minutes

20 hours 15 minutes.

4. **4:25 pm to 1:10 am**

4:25 p.m. = 1625 hours

Time duration from 4:25 p.m. to 12:00 midnight

= 7 hours 35 minutes

 \therefore Time duration from 4 : 25 p.m. to 1 : 10 a.m. = 7 hours 35 min

+ 1 hour 10 min

= 8 hours 45 minutes.

0 - 1 2 5 6 5 3

7 3 5 + 11 0 8

B. Table:

S.No.	Standing Time	Elapsed Time	Finishing Time	Solution
1.	21 st December	26 days	15 January	Starting time = 21 Dec Time duration = 26 days Finishing time = Starting time + Elased time 21 Dec -31 Dec = 11 days (31-21+1=11 days) 1 Jan -15 Jan = 15 days
				(11 + 15 = 26 days) Then Finishing
				time = 15 Jan.

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2.	19 th November	25 days	13 December	$\begin{array}{llllllllllllllllllllllllllllllllllll$
3.	3 rd March	47 days	18 April	Starting time $= 3$ March Time duration $= 47$ days Finishing time $= 5$ Starting time $+ 1$ Elased time $= 3$ March $= 29$ days $= 3$ March $= 3$ Ma
4.	21 March	13 days	2 nd April	Finishing time = Starting time $-$ Elased time 2^{nd} April to 1^{st} April = 2 days $(13-2)$ days = 11 days 21 March-31st March = 21^{st} March
5.	14 December	28 days	10 th January	$10 \mathrm{Jan} - 10 \mathrm{Jan} = 10 \mathrm{days}$ $(28 - 10) \mathrm{days} = 18 \mathrm{days}$ $14 \mathrm{Dec}$ $= 18 \mathrm{days}$ $= 14 \mathrm{Dec}$
6.	16 May	40 days	24 June	Finishing time = 24^{th} June Elapsed time = 40 days 24 Days of June = $24(40 - 24)$ days = 16 days 16 May- 31 May = 16 days Then starting time = 16 May

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C. Solve.

- Time on which Vinny steeps 9:30 pm 6:30 am Time on which she gets up
 - 12:00 mid night 9:30 pm

2:30 hours 6:30 hours

2:30+6:309:00 hours ∴ Total time period

Hence, Vinny sleeps for 9 hours.

2. Starting leave 12 January; Duration of leave = 40 days

Finishing time Leaves =

Finishing time Starting time + Duration =

(12 Jan - 31 Jan)(31 - 12 = 19 days)19 days (1 Feb – 21 Feb) (19 + 21 = 40 days)21 days

Hence, Mohit will join the office on 21 February.

3. Leave starting time = 23 rd March; Leave finishing time 8th April

Time duration 23 rd march to 8th April

23 rd March \rightarrow 31 March 8 days 1 April \rightarrow 8 April = 8 days

.: Time duration (8 + 8 + 1)17 days =

Hence, jojo absent for 17 days.

4. Match over 6:15 pm

> 1 hour 40 minutes Time period

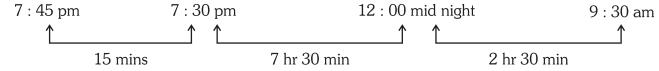
> > 1 hour 6:15 pm — \rightarrow 5: 15 pm \rightarrow 4: 35 pm

Hence, the starting time of match is 4:35 pm.

5. Destination time of train 7:45 pm

10 hours 15 minutes Time duration

Starting time of journey



So, the starting time of journey by the train at 9:30 a.m.

Exercise 10.4

Circle the most appropriate temperature.



2.



3.



4.



6:30 am

An ice-cream 1 °C / 15 °C / A feverish person 36 °C x 39 °C ✓

A bowl of soup

B. Convert the following into Fahrenheit scale.

1. **95°F** =
$$95^{\circ} - 32^{\circ}$$
 = 63°
= $63^{\circ} \times 5$ = 315°

$$= 315^{\circ} \div 9 = \mathbf{35^{\circ}C}$$

$$: C = \frac{5(F - 32)}{9}$$

2. **194°F** =
$$194^{\circ} - 32^{\circ}$$
 = 162°

$$=$$
 $162^{\circ} \times 5$ $=$ 810° $=$ 810° $=$ **90°C**

$$:: C = \frac{5(F - 32)}{9}$$

$$=$$
 203° $-$ 32°

$$C = \frac{5 (F - 32)}{9}$$

$$= 171^{\circ} \times 5$$

 $855 \div 9$

 $499.5^{\circ} \div 9$

=

=

$$99.9^{\circ} \times 5 = 499.5^{\circ}$$

99.9°

$$108.5^{\circ} - 32^{\circ} = 76.5^{\circ} \times 5 =$$

$$382.5^{\circ} \div 9 = 42.5^{\circ} C$$

$$C = \frac{5(F - 32)}{9}$$

5.
$$108.5^{\circ}F = 10$$

$$=$$
 76.5° \times 5 $=$ 382.5° \div 9

 76.5°

$$: C = \frac{5(F - 32)}{9}$$

C. Convert the following into Fahrenheit scale.

1. **35°C** =
$$35^{\circ} \times 9$$

$$35^{\circ} \times 9 = 315^{\circ}$$

 $315^{\circ} \div 5 = 63^{\circ}$

$$63^{\circ} + 32^{\circ} = 95^{\circ}$$

2.
$$95^{\circ}C = 95^{\circ}C$$

$$95^{\circ} \times 9 = 855^{\circ}$$

$$=$$
 855 ÷ 5 $=$ 171°

$$171^{\circ} + 32^{\circ} = 203^{\circ}F$$

$$\therefore F = \frac{C \times 9}{5} + 32$$

$$= 65^{\circ} \times 9$$

$$= 585^{\circ}$$

$$=$$
 117 $^{\circ}$

$$: F = \frac{C \times 9}{5} + 32$$

$$=$$
 37.5° × 9
 $=$ 337.5° ÷ 5

 $585 \div 5$

 $117^{\circ} + 32^{\circ}$

=

=

=

149°F

$$\therefore F = \frac{C \times 9}{5} + 32$$

90.5°C

$$=$$
 $67.5^{\circ} + 32^{\circ}$
 $=$ $90.5^{\circ} \times 9$

162.9°

194.9°F

$$\therefore F = \frac{C \times 9}{5} + 32$$

D. Classify as cold, cool, mild, warm, hot very hot.

=

=

- 1. 42°C very hot
- 2. 15°C

 $814.5^{\circ} \div 5$

 $162.9^{\circ} + 32^{\circ}$

- Cool
- 3. 5°C7. 18°C
- Cold
- 4. 40°C
- Very hot

- 5. 32°C **Hot** 9. 28°C **Warm**
- 6. 25°C 10. 95°F
- **Mild** 7. 1 **Hot**
- Cool
- 8. 23°C
- Mild

E. Find:

5.

1. Feverish

2. 0°C will water turn into ice

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

- 2. (b)
- 3. (b)

4. (b)

5. (c)

NEP Cross-Cultural Learning

Answer these questions:

- 1. Birds's body is 12°C more warmer than a bat's body.
- 2. The body temperature of a spring ant eater is 5°C more colder as compared to a hedgehog.
- 3. The body temperature of a lizard can increase or decrease by 27°C.
- 4. The minimum body temperature of a salmon is 0°C.
- 5. The maximum body temperature of a frog is 20°C.

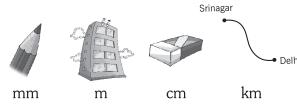
Chapter 1

Measurement

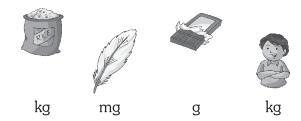
Roll Back

A. Which unit would you use to measure the.

1. length of the following – mm, cm, m or km?



2. weight of the following – mg, g or kg?



3. capacity of the following – mL or L?



B. Fill in the blanks.

1.	43 kg	=	43000	g	2.	4 m	=	400	cm		
3.	14 L	=	14000	mL	4.	9 kg 35 g	=	9035	g		
5.	7 m 15 cm	=	715	cm	6.	6432 mg	=	6	g	432	mg
7.	5000 g	=	5	kg	8.	1352 m	=	1	km	352	m
9.	32 L 10 mL	=	32010	mI.	10.	4300 mL	=	4	L	300	mI.

L∈t´s Do≡

Fill in the blanks:

1.
$$5 \text{ km}$$
 = $(5 \times 1000)_{\text{m}}$ = 5000 m . $(\because 1 \text{ km} = 100 \text{ m})$
2. 5 mm = $\left(5 \times \frac{1}{10}\right)_{\text{cm}}$ = 0.5 cm $(\because 1 \text{ mm} = \frac{1}{10} \text{ cm})$
3. 5 cm = $\left(5 \times \frac{1}{100}\right)_{\text{m}}$ = 0.05 m $(\because 1 \text{ m} = 100 \text{ cm})$
4. 500 mm = $\left(\frac{500}{10}\right)_{\text{cm}}$ = 50 cm $(\because 1 \text{ mm} = \frac{1}{10} \text{ cm})$
5. 5000 cm = $\left(\frac{5000}{100}\right)_{\text{m}}$ = 50 m $(\because 1 \text{ cm} = \frac{1}{100} \text{ m})$
6. 5000 m = $\left(\frac{5000}{1000}\right)_{\text{km}}$ = 5 km $(\because 1 \text{ m} = \frac{1}{1000} \text{ km})$

Exercise 11.1

A. Convert into mm.

1.	6.7 m	=	$(6.7 \times 1000) \text{ mm}$	=	6700 mm	(:: 1 m = 1000 mm)
2.	5.3 cm	=	$(5.3 \times 10) \text{ mm}$	=	53 mm	(:: 1 cm = 10 mm)
3.	3.75 dm	=	$(3.75 \times 100) \text{ mm}$	=	375 mm	(:: 1 dm = 100 mm)
4.	31.13 m	=	$(31.13 \times 1000) \text{ mm}$	=	31130 mm	(:: 1 m = 1000 mm)

5. **1.603 m** =
$$(1.603 \times 1000)$$
 mm = 1603 mm (: 1 m = 1000 mm)

B. Convert into cm.

1.
$$\mathbf{56 \ dm}$$
= $(56 \times 10) \ cm$ = $560 \ cm$ $(\because 1 \ dm = 10 \ cm)$ 2. $\mathbf{7 \ m \ 2 \ dm}$ = $(7 \times 100 + 2 \times 10) \ cm$ $(\because 1 \ m = 100 \ cm)$ = $(700 + 20) \ cm$ = $720 \ cm$ $(\because 1 \ dm = 10 \ cm)$ 3. $\mathbf{15.17 \ dm}$ = $(15.17 \times 10) \ cm$ = $151.70 \ cm$ $(\because 1 \ dm = 10 \ cm)$

4. **23.12 m** =
$$(23.12 \times 100)$$
 cm = 2312 cm (:: 1 m = 100 cm)

5. **2.231 m** =
$$(2.231 \times 100)$$
 cm = 223.1 cm

C. Convert into m.

1. **6 hm 5 dam** =
$$(6 \times 100 + 5 \times 10)$$
 m = $(600 + 50)$ m = 650 m
2. **1.867 km** = (1.867×1000) m = 1867 m
3. **56 dam** = (56×10) m = 560 m
4. **23 hm** = (23×100) m
= 2300 m

5. **2.935 km** =
$$(2.935 \times 1000)$$
 m $(:1 \text{ km} = 1000 \text{ m})$ = 2935 m

D. Convert.

1. **1.76 m convert into dam** =
$$\frac{1.76}{10}$$
 dam = 0.176 dam (:: 1 dam = $\frac{1}{10}$ m)

2. **17.08 km convert into m** =
$$17.08 \times 1000 \text{ m}$$
 = 17080 m (:: 1 km = 1000 m)

3. **4.09 km convert into dam** =
$$4.09 \times 100 \text{ dam}$$
 = 409 dam ($\because 1 \text{ km} = 100 \text{ dam}$)

4. **13.78 hm convert into km** =
$$13.78 \div 10 \text{ km}$$
 = 1.378 km ($\because 1 \text{ km} = 10 \text{ hm}$)

5. 13.05 m convert into hm and dam

$$13.05 \text{ m}$$
 = $(13.05 \div 100) \text{ hm}$ = 0.1305 hm (:: 1 hm = 100 m)
 13.05 m = $(13.05 \div 10) \text{ dm}$ = 1.305 dam (:: 1 dam = 10 m)

6. **915 cm into m**

915 cm =
$$(915 \div 100) \text{ m}$$
 = 9.15 m (:: 1 cm = $\frac{1}{100} \text{ m}$

7. **3869** m into km, hm, dam, m

$$3869 \,\mathrm{m} = 3 \,\mathrm{km} \,8 \,\mathrm{hm} \,6 \,\mathrm{dam} \,9 \,\mathrm{m} \,(::1 \,\mathrm{km} = 1000 \,\mathrm{m}, \,1 \,\mathrm{hm} = 100 \,\mathrm{m}, \,1 \,\mathrm{dam} = 10 \,\mathrm{m})$$

8. **5217 m convert into km**

$$5217 \text{ m} = (5217 \div 1000) \text{ m} = 5.217 \text{ km} (\because 1 \text{ km} = 1000 \text{ m})$$

9. **700 cm convert into dam**

$$700 \text{ cm} = (700 \div 1000) \text{ dam} = 0.7 \text{ dam} \quad (\because 1 \text{ dam} = 1000 \text{ cm})$$

E. Add.

1. 9 km + 6.099 km + 11.586 km

- : 26.82 km
- 3. **13 km 583 m + 10 km 5 m + 15 km 26 m**

K	m		m	
1	3	5	8	3
1	0	0	0	5
+ 1	5	0	2	6
3	8	6	1	4

- ∴ 38 km 614 m
- 5. 56.7 cm + 63.2 cm + 56.7 cm

- : 176.6 cm
- F. Subtract:
 - 1. **19.7** cm **11.9** cm

- :. 7.8 cm
- 3. **10.0 km 3.965 km**

∴ 6.035 km

2. 219.70 m + 85.39 m + 2.73 m

- : 307.82 m
- 4. 121 m 13 cm + 97 m 5 cm + 21 m 21 cm

		m		cm
	1	2	1	1 3
		9	7	0 5
+		2	1	2 1
	2	3	9	3 9

- : 239 m 39 cm
- 6. **25.70 m + 13.80 m + 14.02 m**

- ∴ 53.52 m
- 2. **66.85 m 32.39 m**

- : 34.43 m
- 4. **15 cm 8 mm form 19 cm**

	cm	mm
	19	0
+	15	8
	3	2

:. 3 cm 2 mm

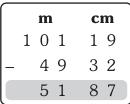
- 5. **8 km 75 m from 12 km 527 m**
 - Km
 m

 1 2 5 2 7

 8 0 7 5

 4 4 5 2
 - ∴ 4 km 452 m

6. **49 m 32 cm from 101 m 19 cm**



∴ 51 m 87 cm

G. Solve the following:

- 1. Cloth required to make curtains = 4.75 metre
 Cloth required to make cushion covers = 5.85 metre
 - ∴ Total length of cloth required
- = (4.75 + 5.85) metre
- = 10.60 metre

Hence, the total length of cloth 10.60 metre is required.

- 2. Distance covered to Rina's house from Rina's friend house = 2.75 km

 Distance covered to Rina's friend house from market = 5.63 km
 - .. Total Distance covered by Rina

- $= (2.75 + 5.63) \times 2 \text{ km}$
- $= 8.38 \text{ km} \times 2 = 16.76 \text{ km}$
- 3. Height of Meena = 118 cm 5 mm = 118.5 cm
 - Height of Pooja = 158 cm 9 mm = 158.9 cm
 - Poja is toller than Meena = 158.9 cm 118.5 cm = 40.4 cm
 - Thus, Poja's height is 40.4 cm taller than Meena's height.

158.9 cm - 118.5 cm

4.75

+5.85

10.60

40.4cm

- 4. Length of one roll of ribbon = 13.75 m
 - Length of another roll of ribbon = 15.85 m or 1585 cm
 - \therefore Total length of ribbon = (13.75 + 15.85) = 29.60 m
 - Thus, the total length of ribbon is 29.60 m.

13.75 m + 15.85 m 29.60 m

Exercise 11.2

A. Multiply.

1. $21.97 \text{ m} \times 3$

$$\begin{pmatrix}
21.97m \\
\times 3 \\
65.91m
\end{pmatrix}$$

4. 3 km 5 hm 6 dam $8 \text{ m} \times 11$

$$\begin{array}{c}
3568 \\
\times 11 \\
3568 \\
35680 \\
39248
\end{array}$$

2. $25.98 \, \text{dm} \times 3$

5. $13 \text{ cm } 8 \text{ mm} \times 5$

3. $36.9 \text{ cm} \times 5$

6. $1.683 \text{ km} \times 9$

$$1.683 \text{ km} \times 9$$
 15.147 km

B. Divide.

1. **276.3** cm by **3**

92.1
3)276.3
_27
0 6
_ 0 6
0.3
03
0

$$\therefore$$
 276.3 cm \div 3 = 92.1 cm

4. **3.762 km by 10**

$$\begin{array}{r}
0.3762 \\
10)3.762 \\
-3.0 \\
\hline
76 \\
-70 \\
\hline
62 \\
-60 \\
\hline
20 \\
-20 \\
\hline
0
\end{array}$$

$$\therefore 3.762 \text{ km} \div 10$$

= 0.3762 km

2. **39.6 m by 4**

$$\begin{array}{r}
 9.9 \\
 4)39.6 \\
 -36 \\
 \hline
 36 \\
 -36 \\
 \hline
 0
\end{array}$$

$$\therefore 39.6 \text{ m} \div 4$$

= 9.9 m

5. **17.8 km by 5**

$$\begin{array}{r}
3.56 \\
5) 17.8 \\
-15 \\
\hline
28 \\
-25 \\
\hline
30 \\
-30 \\
\hline
0
\end{array}$$

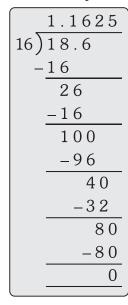
$$\therefore$$
 17.8 km ÷ 5 = 3.56 km

$$\begin{array}{r}
0.00233 \\
8)0.01864 \\
-16 \\
\hline
26 \\
-24 \\
\hline
24 \\
-24 \\
\hline
0
\end{array}$$

$$\therefore 0.01864 \text{ km} \div 8$$

= 0.00233 km or 2.33 m

6. **18.6 km by 16**



$$\therefore$$
 18.6 km ÷ 16 = 1.1625 km

C. Solve.

1. Cloth for one shirt
$$= 2.25 \text{ m}$$

$$\therefore$$
 Clothe for 17 shirts = 2.25 m \times 17

$$= 38.25 \, \text{m}$$

Hence, 38.25 m of cloth is required to stitch 17 shirts.

∴ Cost of 6.75 metre =
$$₹(197 \times 6.75)$$
 of canvas

- 3. Number of days = 4 days
- 4. Length of Road constructed in 30 days = 28.500 km

$$\begin{array}{r}
 395.6 \\
 4)1582.4 \\
 -12 \\
 \hline
 38 \\
 -36 \\
 \hline
 22 \\
 -20 \\
 \hline
 24 \\
 -24 \\
 \hline
 0
\end{array}$$

 $\begin{array}{r}
0.95 \\
30)28.500 \\
-27 \\
\hline
150 \\
-150 \\
\hline
0
\end{array}$

Distance covered in 4 days = 1582.4 kmDistance covered in 1 day = $1582.4 \text{ km} \div 4$ = 395.6 km

Hence, he travelled 395.6 km in 1 day.

 \therefore Length of Road constructed in 1 day = 28.500 km \div 30 = 0.95 km

Thus, the road constructed 0.95 km or 950 metres in each day.

L∈t´s Do≣

A. Fill in the blanks:

1. $2 k_8 = (2 \times 1000)_8 = 2000_8 (\because 1 k_8 = 1000_8)$

2. $5_8 = (5 \times 1000) \,\mathrm{mg} = 5000 \,\mathrm{mg} \quad (\because 1_8 = 1000 \,\mathrm{mg})$

3. $4000 \,\mathrm{mg} = (4000 \div 1000)_{8} = 4_{8} \qquad (\because 1 \,\mathrm{mg} = 1/1000_{8})$

4. $5000 \,\mathrm{mg} = (5000 \div 1000)_{8} = 5_{8} \qquad (\because 1 \,\mathrm{mg} = 1/1000_{8})$

5. $19 \,\mathrm{kg} = (19 \times 1000) \,\mathrm{g} = 19000 \,\mathrm{g} = (19 \times 1000) \,\mathrm{g}$

6. $6.000_8 = (6.000 \div 1000) k_8 = 0.006 k_8$ (:18 = 1/1000 k8)

Exercise 11.3

A. Covert into kg.

1. **7 g** = $(7 \div 1000) \text{ kg}$ = 0.007 kg (:: 1 g = $\frac{1}{1000} \text{ kg}$)

2. **95 g** = $(95 \div 1000) \text{ kg}$ = 0.095 kg $(\because 1 \text{ g} = \frac{1}{1000} \text{ kg})$

3. **695 g** = $(695 \div 1000) \text{ kg}$ = 0.695 kg $(\because 1 \text{ g} = \frac{1}{1000} \text{ kg})$

4. **10 dag** = $(10 \div 100) \text{ kg}$ = 0.10 kg (: 1 dag = $\frac{1}{100} \text{ kg}$)

5. **6513 g** = $(6513 \div 1000) \text{ kg}$ = 6.513 kg $(\because 1 \text{ g} = \frac{1}{1000} \text{ kg})$

6. **17 hg** = $(17 \div 10) \text{ kg}$ = 1.7 kg (: 1 hg = $\frac{1}{10}$ kg)

B. Convert into g.

1. **200 mg** =
$$(200 \div 1000) g$$
 = $0.2 g$ (:: 1 mg = $\frac{1}{1000} g$)

2. **16 dag** =
$$(16 \times 10)$$
 g = 160 g $(\because 1 dag = 10$ g)

3. **1.638 kg** =
$$(1.638 \times 1000)$$
 g = 1638 g $(\because 1 \text{ kg} = 1000 \text{ g})$

4. **0.005 kg** =
$$(0.005 \times 1000)$$
 g = 5 g $(\because 1 \text{ kg} = 1000 \text{ g})$
5. **4 hg** = (4×100) g = 400 g $(\because 1 \text{ hg} = 100 \text{ g})$

6. **10 dg** =
$$(10 \div 10) g$$
 = $1 g$ (:: $1 dg = \frac{1}{10} g$)

C. Add the following give your answer in kg.

1.
$$6315 g + 2817 g + 178 g$$

$$\therefore$$
 9310 g = 9 kg 310 g

Kg	g
18	706
75	009
+ 13	091
106	806

D. Subtract.

$$\therefore 2.940 \text{ kg} = 2 \text{kg} 940 \text{ g}$$

3. **3 kg 160 g - 390 g**

2.
$$5 \text{ kg } 25 \text{ g} + 835 \text{ g} + 12 \text{ kg } 5 \text{ g}$$

Kg	g
5	025
0	835
+12	005
17	865

.. 17 kg 865 g

4. 13 kg 325 g + 12 kg + 14 kg 981 g

Kg	g
13	325
12	000
+ 14	981
40	306

 \therefore 40 kg 306 g = 40.306 kg

2. **18 g 690 mg – 12 g 150 mg**

g	mg
18	690
- 12	150
6	540

 \therefore 6 g 540 mg = 6.54 g

4. **18 kg 500 g 9 kg 750 g**

Kg	g
18	500
- 9	750
8	750

∴ 8 kg 750 g

E. Solve.

- 1. Maya bought patatos = 4 kg 200 gShe bought brinjals = 2 kg 800 gShe bought tomatoes = 5 kg 750 g
 - :. Total vegetables purchased by Maya = 4 kg 200g + 2 kg 800g + 5 kg 750= 12 kg 750 g = 12.750 g

Thus, Maya purchased 12.750 kg of vegetables in all.

- 2. Weight of the entire box = 12.650 kgWeight of dry fruits = 9.800 kg
 - :. Weight of empty box = (12.650 9.800) kg= 2.850 kg = 2850 g

Hence, the weight of empty box is 2850 g.

- 3. Weight of apples = 2 kg 350 gWeight of papayas = 4 kg 825 gWeight of strawberries = 3 kg 475 g
 - $\therefore \text{ Total weight of fruits} = 2 \text{ kg } 350 \text{ g} + 4 \text{ kg } 825 \text{ g} + 3 \text{ kg } 475 \text{ g}$ = 10 kg 650 g

Hence. Dhrau purchased 10 kg 650 of fruits.

- 4. Rishabh's weights = 42.5 kg
 Deepanshu's weights = 70 kg
 - \therefore Difference in weight = (70-42.50) kg

= 27.50 kg

Kg

2

4

3

10

g 350

825

475

650

70.00 kg
- 42.50 kg
27.50 kg

 $12.650 \, \text{kg}$

22.450 kg

 $9.800 \, \text{kg}$

Hence, Rishabh's weight is 27.5 kg less than Deepanshu's weight.

L∈t's Do≡

Multiply:

1.

- 16.375kg ×4
 - 65.500kg

 $16.375 \, \text{kg} \times 4$

2. 975 g × 15

975 ₈
×15g
4875 ₈
9750 _g
146258

- Let's Do
 - Divide: 1. 209 kg 400 g ÷ 24 = 8 kg 725 g
- $\begin{array}{r}
 24) 209.400 k_{8} \\
 -192 \\
 \hline
 174 \\
 -168 \\
 \hline
 60 \\
 -48 \\
 \hline
 120 \\
 -120 \\
 \hline
 0
 \end{array}$

8.725 kg

Exercise 11.4

A. Multiply.

1. **5 kg 120 g × 5**

Kg	g
5	120
	× 5
25	600

∴ 25 kg 600 g or 25.600 kg

2. **15.060 kg × 9**

Kg	g
15	060
	× 9
135	540

∴ 135 kg 540 g or 135.540 kg

3. **20.806 kg × 17**

Kg	g
20	806
	× 17
145	642
208	060
353	702

∴ 353 kg 702 g or 353.702 kg

- B. Find the quotient.
 - 1. $16.745 \text{ kg} \div 5$

$$\begin{array}{r}
3.349 \, \text{kg} \\
5)16.745 \, \text{kg} \\
-15 \\
\hline
17 \\
-15 \\
\hline
24 \\
-20 \\
\hline
45 \\
-45 \\
\hline
0
\end{array}$$

- \therefore 16.745 kg ÷ 5 = 3.349 kg
- 3. $25.209 \text{ kg} \div 9$

$$\begin{array}{r}
2.801 \, \text{kg} \\
9)25.209 \, \text{kg} \\
-18 \\
\hline
72 \\
-72 \\
\hline
009 \\
-009 \\
\hline
0
\end{array}$$

 $\therefore 25.209 \text{ kg} \div 9 = 2.801 \text{ kg}$

4. 4 kg 2 hg 6 dag 5g \times 7

Kg	hg	dag	g
4	2	6	5
		×	7
2 9	8	5	5

∴ 29 kg 8 hg 5 dag 5 g or 29.855 kg

2. **56080 g** ÷ **8**

$$\begin{array}{r}
 7010g \\
 8)56080g \\
 -56 \\
 \hline
 08 \\
 -08 \\
 \hline
 00
\end{array}$$

- $\therefore 56080 \, g \div 8 = 7010 \, g$
- 4. **13.488 kg ÷ 12**

$$\begin{array}{r}
1.124 \, \text{kg} \\
12)13.488 \, \text{kg} \\
-12 \\
\hline
14 \\
-12 \\
\hline
28 \\
-24 \\
\hline
48 \\
-48 \\
\hline
0
\end{array}$$

 \therefore 13.488 kg ÷ 12 = 1.124 kg

C. Solve the following:

1. Weight of 1

watermelon = 2 kg 695 g

Weight of 13

watermelons = $2 \text{ kg } 695 \text{ g} \times 13$

= 35 kg 35 g

Kg	g
2	695
	$\times 13$
8	085
26	950
35	035

3. Weight of 25

toffees $= 275 \,\mathrm{g}$

 \therefore Weight of 1 = 275 g \div 25 = 11 g

toffee

Now, the weight

of 80 toffees $= 11 \text{ g} \times 80 = 880 \text{ g}$

Thus, the weight of 80 toffees is 880 g.

$$\begin{array}{r}
 11g \\
 25) 275g \\
 -25 \\
 \hline
 25 \\
 \hline
 0
\end{array}$$

2. Number of packets = 45 packets Total quantity of tea = 49 kg 950 g

.. Quantity of tea in one packet

 $= 49 \text{ kg } 950 \text{ g} \div 45 = 1 \text{ kg } 110 \text{ g}$

Hence, each packet of tea contains 1 kg 110g.

	1.11
45)	49.950
_	45
_	4 9
	-45
_	45
	-45
_	0
	0
_	

4. Weight of 16 packets of biscuits

= 7 kg 872 g or 7.872 kg

Weight of 1 packet of biscuits

 $= 7.872 \text{ kg} \div 16 = 0.492 \text{ kg}$

Now, the weight of 7 packets of biscuits

 $= 0.492 \text{ kg} \times 7 = 3.444 \text{ kg}$

Thus, the weight of 7 packets of biscuits is 3 kg 444 g.

$$\begin{array}{r}
0.492 \, \text{kg} \\
16)872 \, \text{kg} \\
-64 \\
\hline
147 \\
-144 \\
\hline
32 \\
-32 \\
\hline
0
\end{array}$$

$$0.492 \text{ kg} \times 7$$
 3.444 kg

L∈t's Do≣

Fill in the blanks:

1.
$$3L = (3 \times 1000) \,\mathrm{mL} = 3000 \,\mathrm{mL}$$

3.
$$10.5 L = 10.5 \times 1000 \text{ mL} = 10500 \text{ mL}$$

5.
$$1535 \,\mathrm{mL} = \frac{1535}{1000} \,\mathrm{L} = 1.535 \,\mathrm{L}$$

2.
$$6.458 L = 6.458 \times 1000 mL = 6458 mL$$

4.
$$4265 \,\mathrm{mL} = \frac{4265}{1000} \,\mathrm{L} = \mathbf{4.265} \,\mathbf{L}$$

6.
$$750 \,\mathrm{mL} = \frac{750}{1000} \,\mathrm{L} = \mathbf{0.75} \,\mathrm{L}$$

Exercise 11.5

A. Convert into litres.

1. **200 mL** =
$$\left(\frac{200}{1000}\right)$$
 L

2. **31 mL** =
$$\left(\frac{31}{1000}\right)$$
 L

$$(1 L = 1000 \text{ mL})$$

: 0.2 L

$$(::1 L = 1000 \text{ mL})$$

= 0.031 L

3. **617 mL** =
$$\left(\frac{617}{1000}\right)$$

4. **83016 mL** =
$$\left(\frac{83016}{1000}\right)$$
I

$$(:: 1 L = 1000 mL)$$

$$(:: 1 L = 1000 m)$$

$$= 0.617 L$$

5. **5 L 631 mL** =
$$5.613 L$$

6. **2 L 15 mL** =
$$2.015 L$$

B. Convert into mL.

1. **11 L** =
$$11 \times 1000 \text{ mL}$$

2. **12 L 2 mL** =
$$(12 \times 1000 + 2)$$
mL

$$(:: 1 L = 1000 mL)$$

$$(:1 L = 1000 \text{ mL})$$

 $(12000 + 2) \text{ mL}$

$$=$$
 12002 mL

3. **0.516 L** =
$$0.516 \times 1000 \text{ mL}$$
 (:: 1 L = 1000 mL)

$$93.568 \times 1000 \text{ mL}$$

(::1 L = 1000 mL)

$$(:1 L = 1)$$

$$= 93568 \text{ mL}$$

5. **0.087 L** =
$$0.087 \times 1000 \text{ mL}$$

$$5.367 \times 1000 \text{ mL}$$

$$(:: 1 L = 1000 mL)$$

$$(:: 1 L = 1000 mL)$$

$$=$$
 87 mL

$$=$$
 5367 mL

C. Add:

1.
$$3 L 725 mL + 8.685 L + 14.5 L$$

$$\therefore 3.725 L + 8.685 L + 14.5 L = 26.910 L$$

$$\therefore 1.450 L + 80.692 L + 3.721 L = 85.863 L$$

3. **6 L 498 mL + 14 L 506 mL + 7 L 98 mL**

D. Subtract.

1. Subtract 15 L 396 mL from 17 L

L	mL
17	000
- 15	396
1	604

: 1 L 604 mL

3. Subtract 18 L 215 mL from 21 L

L	mL
2 1	000
- 18	215
2	785

:. 2 L 785 mL

2. Subtract 985 mL from 2 L 630 mL

∴ 1 L 645 mL

4. From 19 L, 780 mL subtract 12319 mL

∴ 7 L 461 mL

E. Solve.

1. Required milk to prepare sweets = 17.950 L

Required milk to prepare curd = 18.695 L

Required milk to prepare tea = 5.165 L

The shop keeper needs milk to do its work = 17.950 L + 18.695 L + 5.165 L

= 41.810 L

17.950L 18.695L + 5.165L 41.810L

Hence, the shopkeeper required 44.810 L of milk to do its work.

2. Capacity of water tank' = 1000 L

Water in the water tank = 873.73 L

 \therefore More water can be stored in the tank = 1000 L - 873.73 L = 126.27 L

Hence, 126.27L of more water can stored in the tank.

1000.00L -873.73L 126.27L

Exercise 11.6

A. Find the product and express your answer in Liters.

1. 5 mL × 17

2. **323 mL × 9**

3. **21 L 8 mL × 13**

 \therefore 5 mL \times 17 = 85 mL

 $\therefore 323 \text{ mL} \times 9 = 2907 \text{ mL}$

 $\therefore 273.104L = 273L 104 mL$

4. $16 L 75 mL \times 12$

 $16.075 \, \text{mL}$ $\times 12$ $32.150 \, \text{mL}$ $160.750 \, \text{mL}$

192.900 mL

5. **1823 mL × 11**

18.23 mL ×11 mL 1823 mL 18230 mL 200.53 mL 6. **7.639 L × 3**

7.639L ×33 22.917L 229.170L 252.087L

:. 192.900 L or 192 L 900 mL

∴ 20053 mL or 20 L 53mL

∴ 252.087 L or 252L 87 mL

B. Find the quotient.

 $5.895 L \div 3$

	1.965L
3)	5.895L
_	- 3
	2 8
	- 2 7
	1 9
	- 1 8
	1 5
	0

- ∴ 1.965 L or 1 L 965 mL
- 19.275 L ÷ 5 4.

- ∴ 3.855 L or 3 L 855 mL
- C. Solve.

Length of a Saree
$$= 5.672 \text{ m}$$

Length of 50 Sarees $= (5.672 \times 50) \text{ m}$

283.600 m

Hence, the length of 50 sarees is 283.600 m.

- 2. Quantity of cough cyrup taken in 1 dose
 - .. Quantity of caugh cyrup taken in a day

So, the Quantity of cough cyrup taken in 15 days

- 3. Capacity of petrol stored in 32 tanks
 - .. Capacity of petrol stored in each tank

Hence, 132.58 L of petrol stored in 1 tank.

2. 17.388 L ÷ 6

- ∴ 2.898 L or 2 L 898 mL
- 5. 81.312 L ÷ 11

- :. 7.392 L or 7 L 392 mL
 - 5.672 m \times 50 m 283.600 m
 - $= 5 \, \text{mL}$
 - $5 \text{ mL} \times 3 \text{ times}$
 - $= 15 \,\mathrm{mL}$
 - $= (15 \times 15) \, \text{mL}$
 - $= 225 \, mL$
 - 4242.56 L $(4242.56 \div 32) L$
 - 132.58 L

379

3. 16.398 L ÷ 9

- ∴ 1.822 L or 1 L 822 mL
- 6. 97.042 L ÷ 11

8 . 8 2 2 L
11) 9 7 . 0 4 2 L
- 8 8
9 0
- 8 8
2 4
- 2 2
2 2
- 2 2
0

- ∴ 8.822 L or 8 L 822 mL
 - 1 3 2 . 5 8 32)4242.56
 - - 1 8 5 _ 1 6 0
 - 2 5 6 -256

Worksheet

- 1. The length of a cricket pitch is 22 yards. The equivalent length in metres is **20.11m**
- 2. If Ajay ordered a 4 pound cake for his birthday, what is the equivalent mass in kilograms? **2.04 kg**.
- 3. The water tax bill shows the consumption of 8000 gallons of water. The equivalent consumption in litres is **30320L**.
- 4. If a wheat bag weighs 80 kg, the equivalent weight in pounds is **176 pounds**.
- 5. The distance between Delhi and Mussoorie is 275 km. The equivalent distance in miles is **170.80** miles.
- 6. Mrs. Sen bought 500 g cedar cheese for pizza. The equivalent weight in ounce is **17.70** once.
- 7. Mr. Singh is 6 feet 2 inch tall. What is his height in metres and centimetres? 1 m and 88 cm.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (b)

3. (a)

Chapter 12

Average

L∈t's Do≣

Fill in the blanks:

- 1. Average of 10, 35 and 15 is **20**.
- 3. Average of all factors of 15 = 6.

$$2. \quad \frac{10+20+30+40}{4} = \frac{\boxed{100}}{4} = \mathbf{25}$$

HOTS QUESTION

The average number of students present in the class:

The average on first three days = 27 students

The average on next two days = 29 students

 $And, the \, weekly \, average \, = \, 28 \, students$

Total number of days in a week = 6

(:: Sunday to be holiday).

Now, Average
$$= \frac{\text{Sum of the values}}{\text{Number of values}}$$

$$28 = \frac{27 \times 3 \times 29 \times 2 \times x}{6}$$

$$28 \times 6 = 81 + 58 + x$$

 $168 - 81 - 58 = x$
 $\therefore x = 168 - 139 = 29$

Hence, 29 students were present in the class in Saturday.

Exercise 12

A. Find the average of the given sets.

1. **18, 21, 32, 19, 25**

$$\therefore \text{ Average} = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \frac{18 + 21 + 32 + 19 + 25}{5}$$

$$= \frac{115}{5} = 23$$

3. **11, 12, 13, 14**

∴ Average =
$$\frac{\text{Sum of the Values}}{\text{Number of Values}}$$

= $\frac{11 + 12 + 13 + 14}{4}$
= $\frac{50}{4}$ = 12.5

5. **12 kg, 15 kg, 18 kg**

$$\therefore \text{ Average} = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \left(\frac{12 + 15 + 18}{3}\right) \text{kg}$$

$$= \frac{45}{3} \text{kg} = 15 \text{ kg}$$

B. Solve these problems.

∴ Average =
$$\frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \frac{21+23+25+27+2}{300}$$

: 30 is an even number.

So, the average is an even number.

$$\therefore \text{ Average } = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

2. **6, 8, 12, 16**

$$\therefore \text{ Average} = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \frac{6+8+12+16}{4}$$

$$= \frac{42}{4} = 10.5$$

4. **₹23, ₹36, ₹19, ₹22, ₹10**

∴ Average =
$$\frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= ₹ \left(\frac{₹23 + 36 + 19 + 22 + 10}{5} \right)$$

$$= ₹ \frac{110}{5} = ₹ 22$$

6. 5 cm, 10 cm, 15 cm, 20 cm

$$\therefore \text{ Average} = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \left(\frac{5 + 10 + 15 + 20}{4}\right) \text{cm}$$

$$= \frac{50}{4} \text{ cm} = 12.5 \text{ cm}$$

21, 23, 25, 27, 29, 31, 33, 35, 37, 39

Number of Values
$$\frac{21+23+25+27+29+31+33+35+37+39}{10}$$

$$=$$
 $\frac{300}{10}$ $=$ 30

$$= \frac{12 + 18 + 9 + 11 + 7 + 14 + 6}{7} = \frac{77}{7} = 11$$

So, the average age is 11 years.

3. First seven multiples of 8 = 8, 16, 24, 32, 40, 48 and 56

$$\therefore \text{ Average } = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \frac{8+16+24+32+40+48+56}{7} = \frac{224}{7} = 32$$

: 32 is nat multiple of 8.

So, the average is a multiple of 8.

4. Number of days = 4
Rain fall in four consecutive days = 2.2 cm, 3.4 cm, 0.6 cm and 1.8 cm

∴ Average rain fall
$$=$$
 $\frac{\text{Total Rainfall}}{\text{Number of days}}$ $=$ $\left(\frac{2.2 + 3.4 + 0.6 + 1.8}{4}\right) \text{cm}$ $=$ $\frac{8.0}{4} \text{ cm} = 2.0 \text{ cm}$

Hence, the average of daily rainfall is 2.0 cm.

5. Number of days selling goods = 5 days

Goods sold the shopkeeper = ₹6000, ₹4500, ₹3500, ₹3000, ₹4000

∴ Average sale =
$$\frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$= \frac{₹(6000 + 4500 + 3500 + 3000 + 4000)}{5}$$

$$= \frac{₹21000}{5} = ₹4200$$

Hence, the average sale of the shopkeeper is ₹4200.

6. The average of 6 numbers = 492

$$\therefore \text{ Average } = \frac{\text{Sum of the Values}}{\text{Number of Values}}$$

$$\therefore 492 = \frac{\text{Sum}}{6}$$

$$\text{Sum } = 492 \times 6 = 2952$$

Hence, the total sum of 6 numbers is 2952.

7. Average score of Vineet = 73 runs

And, the number of matches =
$$5$$

 \therefore Average runs = $\frac{\text{Sum of the Values}}{\text{Number of Values}}$

$$\therefore 73 \qquad = \frac{\text{Sum}}{5}$$

Sum =
$$73 \times 5 = 365$$
 runs

Hence, Vineet scored 365 runs altogether in 5 matches.

8. Average distance covered by train in a day = 460 kmAnd, the number of days = 7

∴ Average speed =
$$\frac{\text{Sum of the Values}}{\text{Number of Values}}$$

∴ 460 km = $\frac{\text{Sum}}{7}$

$$\begin{array}{c|c}
460 \\
\times 70 \\
\hline
3220
\end{array}$$

Sum

 $(460 \times 7) \text{ km} = 3220 \text{ km}$

Hence, the train will cover 3220 km of distance in 7 days.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (b)

2. (a)

3. (c)

NEP SDGs for Qualitative Education

Do it yourself.

Chapter 13

Geometry

Roll Back

A. Count and write the number of edges, corners and faces.

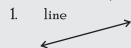
Shana		How many		
Shape	Edges Corners (vertices)		Faces	
	12	8	6	
	1	1	2	
	2	0	3	

B. Fill in the blanks.

- 1. A triangle has **3** sides and **3** corners.
- 2. A square has 4 sides.
- 3. A circle has **0** vertex.

Let's Do≣

Mark arrowheads and points to convert it to a







Tricky Maths

Fill in the blanks:

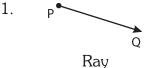
- 1. A line has **no** end points.
- 3. A ray has one end point.

A line segment can be measured.

- 4. Intersecting lines meet at a point.
- 5. The distance between two parallel lines remains same throughout.

Exercise 13.1

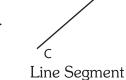
Classify the following as point, line, line segment and ray.



M

Line

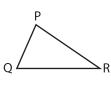
4.



Point

B. Name the line segments in each of the following:

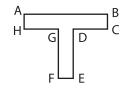
1.



PQ, QR, RP

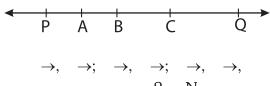


PO, ON, NM, MP



AH, HG, GF, FE, ED, DC, CB, BA

C. Name all rays with initial points A, B and C respectively.



1. Yes

D. State true (T) or false (F):

Ray PQ is the same as ray QP.

False

2. Lines which meet at a common point are called parallel lines.

False

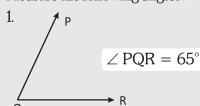
3. A line can be measured. **False**

A point has no length, breadth and height.

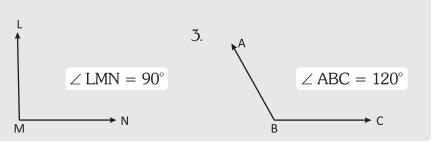
True

Let's Do≡

Measure the following angles:



2.



Exercise 13.2

A. From the given figure, list the points which are:

$$1. \quad \text{in the interior of} \ \angle \ PQR$$

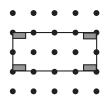
2. in the exterior of
$$\angle PQR$$

3. on
$$\angle PQR$$
 = **S**, **T**

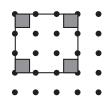
$$= A, B$$

$$A, B = X, Y$$

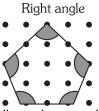
В. In the figures given below colour the right angles in red, the acute angles in blue, and the obtuse angles in green. Some are done for you.



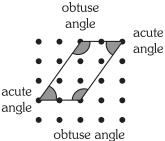
All are right angle

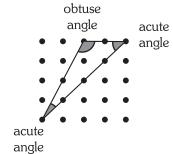


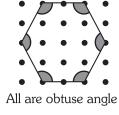
All are right angle

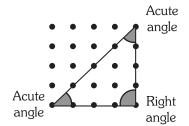


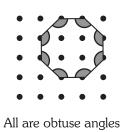
All are obtuse angle





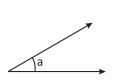






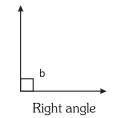
C. Identify the angles as acute, right, obtuse, straight, reflex or complete without measuring them.

1.

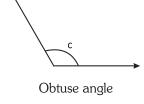


Acute angle

2.

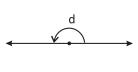


3.

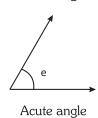


4.

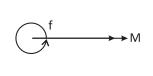
8.



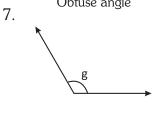
5.



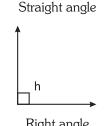
6.



Complete angle

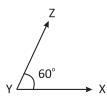


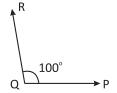
Obtuse angle

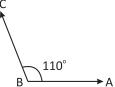


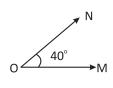
Right angle

D. Measure the following angles using a protractor.









- E. Draw the following angles using a protractor. Name the angles correctly: Do it yourself.
- F. State true (T) or False (F): Rewrite the false statements correctly.

The measure of a complete angle is 180°.

False

2. An obtuse angle is greater than an actue angle but smaller than a straight angle. True

3. When two lines intersect at 90°, they are called parallel lines. **False**

The inner and outer scales of a protractor read the same measurement at 90°.

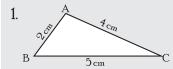
True

 285° is a reflex angle.

True

Let's Do

Name and classify the triangles.



As $\overline{AB} \neq \overline{BC} \neq \overline{CA}$

So \triangle ABC is a scalene triangle.



 $A_s \angle Y = 90^\circ$

So Δ XYZ is a right-angled triangle.

Exercise 13.3

A. In \triangle ABC, name.

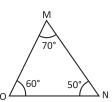
AB, BC, CA

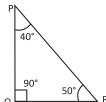
A, B, C 2.

3.

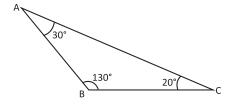
 \angle ABC; \angle BCA; \angle BAC

Classify the triangles according to their angles.



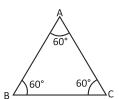


3.

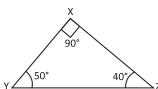


Acute-angled triangle

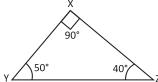
4.



5.

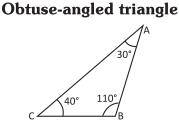


Right-angled triangle



6.

3.

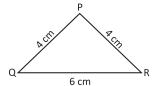


Obtuse-angled triangle

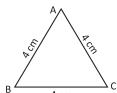
Right-angled triangle Acute-angled triangle

C. Classify the triangles according to the measurement of their sides. 2.

1.



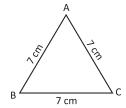
Isosceles triangle



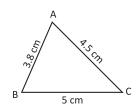
Equilateral triangle

Scalene triangle

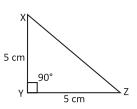
4.



5.



6.



Equilateral triangle

Scalene triangle

Isosceles triangle

D. Find the missing angle of each triangle.

1. We know that;

$$\angle P + \angle Q + \angle R = 180^{\circ}$$
 $70^{\circ} + 60^{\circ} + \angle R = 180^{\circ}$
 $130^{\circ} + \angle R = 180^{\circ}$
 $\angle R = 180^{\circ} - 130^{\circ} = 50^{\circ}$

60°

2. We know that

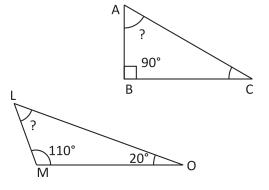
$$\angle A + \angle B + \angle C = 180^{\circ}$$

 $\angle A + 90^{\circ} + 30^{\circ} = 180^{\circ}$
 $\angle A + 120^{\circ} = 180^{\circ}$
 $\angle A = 180^{\circ} - 120^{\circ} = 60^{\circ}$

We know that

$$\angle L + \angle M + \angle O = 180^{\circ}$$

 $\angle L + 110^{\circ} + 20^{\circ} = 180^{\circ}$
 $\angle L + 130^{\circ} = 180^{\circ}$
 $\angle L = 180^{\circ} - 130^{\circ} = 50^{\circ}$



State True or False:

3.

- A triangle can have two right angles. 1.
- 2. Every equilateral triangle is an isosceles triangle.
- 3. A scalene triangle has three sides of different lengths.
- 4. A triangle cannot have more than one obtuse angle.
- A triangle can have each angle less than 60°.

False True

True

True

False

Exercise 13.4

In the given figure ABCD is a quadrilateral Name.

- AB, BC, CD, DA 1.
- $\angle A, \angle B, \angle C, \angle D$
- 3. (AB, CD) or (AD, BC)

В. Write true or false.

- 1. A parallelogram is never be a square.
- 2. A square is always a rectangle.
- 3. A rhombus can never be a square.
- 4. A trapezium is a parallelogram.
- A parallelogram has one set of parallel sides. 5.
- A rectangle has four right angles. 6.

False

True

False

False

False

True

Exercise 13.5

A. Study the given figure carefully and answer the questions.

- A diameter of the circle is **PQ**.
- A minor arc of the circle is **ACB**.
- 5. Points in the interior of the circle are **X,S**.
- OP = OQ are the **radii** of the circle.

B. Draw circles with the following radii using a compass.

Do it yourself.

C. Find the radius of the circles with the following diameter.

1.
$$d = 8 cm$$

2.
$$d = 7.2 cm$$

3.
$$d = 4.8 cm$$
 4. $d = 7 cm$

$$4 d = 7 cm$$

$$\therefore r = \frac{8}{2} \text{ cm} \qquad \therefore r = \frac{7.2}{2} \text{ cm} \qquad \therefore r = \frac{4.8}{2} \text{ cm} \qquad \therefore r = \frac{7}{2} \text{ cm}$$

$$\therefore r = \frac{7.2}{2} \text{cm}$$

$$r = \frac{7}{2} cm$$

$$= 3.6 \, \text{cm}$$

$$= 3.6 \text{ cm} = 2.4 \text{ cm} = 3.5 \text{ cm}$$

2. A chord of the circle is **AB**.

6. A semi-circle is **PCO**.

4. A major segment of the circle is **ARB**.

D. Find the diameter of the circles with the following radii.

1.
$$r = 6 cm$$

$$\therefore$$
 D = (6×2) cm

$$D = 12 \text{ cm}$$

3.
$$r = 4.5 cm$$

$$\therefore$$
 D = (4.5×2) cm

$$D = 9 cm$$

2.
$$r = 3.8 cm$$

$$\therefore$$
 D = (3.8×2) cm

$$D = 7.6 \text{ cm}$$

4.
$$r = 11.7 cm$$

$$\therefore$$
 D = (11.7×2) cm

$$D = 23.4$$

Mental Maths Corner (MCQ's)

Tick (\checkmark) the correct answer.

Worksheet

Fill in the blanks.

- A ray extends endlessly in **one** direction.
- You cannot measure a ray and a line.
- A part of a line that has two endpoints is a **line segment**. 3.
- An angle that looks like the corner of a cupboard is a **Right angle**.
- 5. An angle is formed by two **rays** having a common endpoint.
- An obtuse angle is more than **90**° and less than **180**°. 6.

Computational and Analytical Thinking

Give the measure of the angle formed by the hands of the clock.



2.



3.

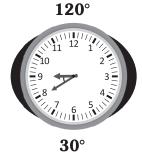


90°

4.



5.



6.



90°

7.



8.



9.



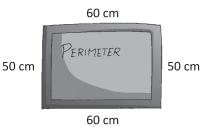
Chapter

Area and Perimeter

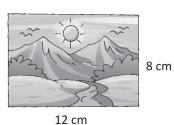
Roll Back

Find the perimeter of the following.

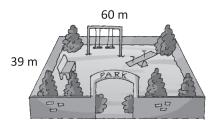
1.



2.



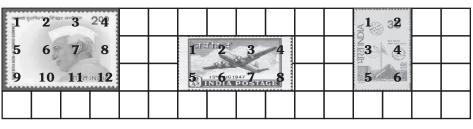
3.



 $P = 2 \times (60 + 50) \text{ cm} = 220 \text{ cm}$

 $P = 2 \times (12+8) \text{ cm} = 40 \text{ cm}$ $P = 2 \times (60 + 39) \text{ m} = 198 \text{ m}$

Find the area of the following stamps:

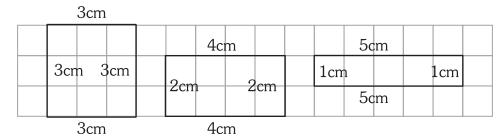


12 sq. units

8 sq. units

6 sq. units

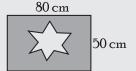
C. In the following cm-squared paper draw rectangles with perimeter 12 cm.



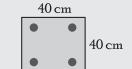
Let's Do

Find the perimeter of each of the following flag.

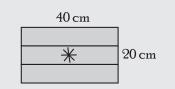
1.



P = 2(80 + 50) cm = 260 cm



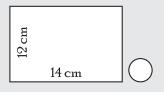
 $P = 4 \times 40 \, cm = 160 \, cm$

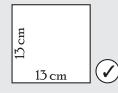


P = 2(40 + 20) cm = 120 cm

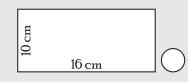


Sonakshi has to order covers for CDs. The perimeter of a cover has to be 52 cm. Tick (✓) the cover in which the CD can fit.





2.





Exercise 14.1

Find the perimeter.

Length of book 20 cm; Breadth of book

40 cm 2(20 + 40) cm

3.

.: Perimeter of book 2 (length + baeadth) $2 \times 60 \text{ cm}$

120 cm. =

=

2. Length of lunch box 15 cm;

Breadth of lunch box 12 cm

 \therefore Perimeter of lunch box = 2 (length + breadth) 2(15 + 12) cm

 $2 \times 27 \text{ cm}$ 3.

55 cm ;

Length of carpet Breadth of carpet 14 cm =

.: Perimeter of carpet 2 (length + breadth) =

2(55 + 14) cm =

54 cm.

 $2 \times 69 \text{ cm}$ Length of flag

60 cm : Breadth of flag 138 cm. 40 cm

2 (length + breadth) .. Perimeter of flag =

=

=

2(60 + 40) cm

Length of Door

.: Perimeter of Door

 $2 \times 100 \text{ cm}$ 80 cm: Breadth of Door

135 cm = 2(80 + 135) cm

200 cm.

2 (length + breadth) $2 \times 215 \text{ cm}$ =

430 cm.

6. Length of Diary = 18 cm; Breadth of Diary = 20 cm \therefore Perimeter of Diary = 2 (length + breadth) = 2 (20 + 18) cm= $2 \times 38 \text{ cm}$ = **76 cm.**

B. Find the missing entry of the rectangle for each of the following:

C Ni	D •	T	D -111-	6.1			
S.No.	Perimeter	Length	Breadth	So	lution		
1.	56 cm	18 cm	10 cm	Perimeter = 56 cm = 56 cm = 2b = =	2 (18 + b) 36 + 2b		
2.	192 cm	50 cm	46 cm	Perimeter = 192 = 192 = 2 L = L =			
3.	120 cm	40 cm	20 cm	Perimeter = 120 = 120 = 2 L = L = 120 = 12	2 L + 40		
4.	64 m	20 m	12 cm	Perimeter = 64 = 64 = 2 b = =	2 (20 + b) 40 + 2 b		
5.	144 m	48 m	24 m	Perimeter = 144 = 144 = 2 b = 2 b = b = =	$2 (L + b)$ $2 (48 + b)$ $96 + 2 b$ $144 - 96$ 48 $\frac{48}{2} = 24 m$		

MATHEMATICS-5

C. Find the side of the square for each of the following:

S.No.	Perimeter	Solution	Side
		Perimeter = 4 sides Side = Perimeter 4	
1.	16 cm	$Side = \frac{16}{4} = 4cm$	4 cm
2.	48 cm	$Side = \frac{48}{4} = 12cm$	12 cm
3.	27 cm	Side = $\frac{27}{4}$ = 6.75cm	6.75 cm
4.	144 cm	$Side = \frac{144}{4} = 36cm$	36 cm
5.	324 cm	$Side = \frac{324}{4} = 81cm$	81 cm

L	€ť	S	Do

Tick (\checkmark) the unit of area you will use to find the area of the following.

- 1. A cover page of your maths books
- 2. A blackboard
- 3. A football field
- 4. New Delhi, the capital of India
- 5. The label on your exercise book

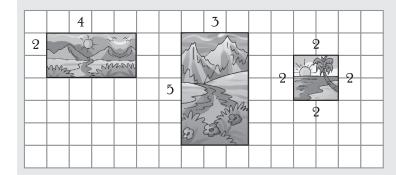
- sg. cm
 - **✓**
- [
 - **✓**

sg. m

- sg. km
- ✓

L∈t´s Do≣

Measure the length and breadth of each painting and fill in the blanks.



Painting A:

Length = $4 \, \text{cm}$; breadth = $2 \, \text{cm}$

Area of painting $A = 4 \times 2 = 8 \text{ sg. cm}$

Painting B:

$$l = 3 \text{ cm}; b = 5 \text{ cm}$$

 $A = 5 \times 3 = 15 \text{ sq. cm}$

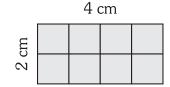
Painting C:

$$l = 2 \text{ cm}; b = 2 \text{ cm}$$

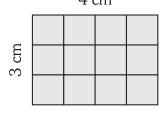
 $A = 2 \times 2 = 4 \text{ sq. cm}$

Exercise 14.2

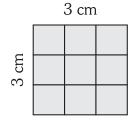
A. Measure the length and breadth and find the area.



2.



3.



$$l = 4 \text{ cm}, b = 2 \text{ cm},$$

$$A = 1 \times b = 4 \times 2$$

$$= 8 \text{ sq.cm}$$

$$A = 8$$
 sq. cm

$$l = 4 \text{ cm}, b = 3 \text{ cm},$$

$$A = 1 \times b = 4 \times 3$$

$$= 12 \text{ sq.cm}$$

A = **12** sq. cm

$$l = 3 \text{ cm}, b = 3 \text{ cm},$$

$$A = 1 \times b = 3 \times 3$$

$$= 9 \text{ sq.cm}$$

$$A = 9$$
 sq. cm

B. Find the area of the following.

$$= 4 cm$$

$$\therefore$$
 Area of Square = (4×4) sq.cm

= 16 sq.cm

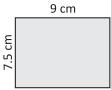
2. L = 9cm, b = 7.5cm

$$\therefore$$
 Area of Rectangle = $1 \times b$

$$= (9 \times 7.5) \text{ sq.cm}$$

= 67.5 sq.cm





3. Area of the given figure
$$=$$
 Area of A + Area of B + Area of C

Rectangle A; 1

Area of A

Rectangle B; 1

Area of B

Rectangle C; 1

Area of C

= 5 cm, b = 3 cm

= 5 cm, 0 = 5 cm

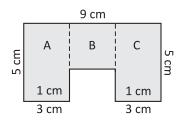
= $5 \times 3 = 15$ sq. cm = 3 cm, b = 4 cm

 $= 3 \times 4 = 12 \text{ sq. cm}$

= 5 cm, b = 3 cm

 $= 5 \times 3 = 15 \text{ sq. cm}$

 \therefore Area of the given figure = 15 + 12 + 15 = 42 sq. cm



C. Complete the following table.

S.No.	Length (L)	Breadth (b)	Area		Solution	
1.	6 cm	4 cm	24 sq.cm	Area A	$= 1 \times b$ $= 6 \times 4$ $= 24 \text{ so}$	1

2.	16 cm	8 cm	128 sq.cm	Area 128 b	= = =	$L \times b$ $16 \times b$ $\frac{128}{16} = 8 \text{ cm}$
3.	14 cm	7 cm 98 sq.cm Area = A = = = =		=	$1 \times b$ 14×7 sq. cm 98 sq. cm	
4.	24 cm	10 cm	240 sq.cm	Area 240 b	= = =	$ \begin{array}{c} 1 \times b \\ 24 \times b \\ \hline 240 \\ 24 \end{array} = 10 \text{ cm} $
5.	11 cm	9 cm	99 sq.cm	Area Area	= = =	$l \times b$ 11×9 99 sq. cm
6.	18 cm	15 cm	270 sq.cm	Area 270 L	= =	$L \times b$ $L \times 15$ $\frac{270}{15} = 18 \text{ cm}$
7.	13 cm	7 cm	91 sq.cm	Area A	= = =	$L \times b$ 13×7 91 sq. cm
8.	85 cm	5 cm	425 sq.cm	Area 425 L	= =	$L \times b$ $L \times 5$ $\frac{425}{5} = 85 \text{ cm}$

D. Complete the following table.

S.No.	Side (cm) of Square	Solution				
				Area =	(Side) ²	
1.	6	А	=	(6) ² cm ²	=	36 cm ²
2.	9	А	=	$(9)^2 \text{ cm}^2$	=	81 cm ²
3.	12	А	=	$(12)^2 \text{ cm}^2$	=	144 cm ²
4.	16	А	=	$(16)^2 \text{ cm}^2$	=	256 cm ²
5.	18	А	=	$(18)^2 \text{ cm}^2$	=	324 cm ²

6.	25	А	=	$(25)^2 \text{ cm}^2$	=	625 cm ²
7.	30	А	=	$(30)^2 \text{ cm}^2$	=	900 cm ²
8.	41	А	=	$(41)^2 \text{ cm}^2$	=	1681 cm ²

L∈t´s Do≣

Find the area of the triangles shaded in green.

1.



2.



3.



2 sq. cm

Area of square = 4 sq. cmHalf area of square = $4 \times \frac{1}{2}$ = 2 sq. cm 4.5 sq. cm

Area of rectangle = 9 sg. cmHalf area of square = $9 \div 2$ = 4.5 sg. cm. 3 sq. cm

Area of rectangle = 6 sg. cmHalf area of = $6 \div 2$ rectangle = 3 sg. cm.

Let's Do≣

Find the area of the red.

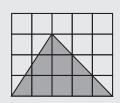
1. In Fig 1.

Number of complete square enclosed by the figure =

Number of half square = 3

Number of more than half square = 2 Number of less than half square = 2 (ignore it)

 $\therefore \text{ Area of the figure} = (4 + \frac{1}{2} \times 3 + 2) \text{ sg cm.}$



2. In Fig 2.

Number of complete square = 6 Number of half square = 6

Number of natissitate

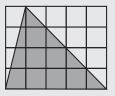
Number of square more than half = 1

Number of less than half square = 1(ignore it)

 $\therefore \text{ Area of the figure} = (6 + \frac{1}{2} \times 6 + 1) \text{ sg. cm}$

= (6+3+1) sq. cm = **10 sq. cm**

(6 + 1.5) sg. cm **7.5 sq. cm**



3. In Fig 3.

Number of completes squares = 2

Number of half squares = 0 Number of more than half = 4

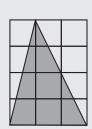
Number of more than half = 4

Less than half square = 4

 $\therefore \text{ Area of the figure} = (2 + \frac{1}{2} \times 0 + 4) \text{ sg. cm}$

= (2+0+4) sg. cm

= 6 sq. cm



Exercise 14.3

A. Find the area of the pink triangles, if the side of each small square is 1 cm.

1. In Figure 2.

Number of square more than half = 1 Number of half square = 2

Number of less than half square = 1 (ignore it)



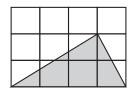
$$=$$
 1 + 1 = 2 sq. cm

(4 + 0.5) sq. cm = **4.5 sq. cm**

2. **In Figure 2.**

Number of complete square = 1
Number of square more than half = 3
Number of half squares = 0

Number of less than half square = 3 (ignore it) \therefore Area of the figure = (1 + 3)) sq. cm = $\mathbf{4}$ sq. cm



3. **In figure 3.**

Complete square = 1 More than half square = 3 Half square = 1

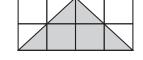
 \therefore Area of the figure = $(1 + 3 + \frac{1}{2} \times 1)$ sq. cm



4. **In figure 4.**

Complete square = 2 Half square = 4

∴ Area of the figure = $\left(2 + 4 \times \frac{1}{2}\right)$ sq. cm



$$=$$
 (2+2) sq. cm

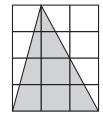
4 sq. cm

5. **In figure 5.**

 $\begin{array}{llll} \text{Complete squares} & = & 2 \\ \text{More than half squares} & = & 4 \\ \text{Half squares} & = & 0 \\ \end{array}$

Less than half squares = 4 (ignore)

... Area of the figure = (2 + 4 + 0) sq. cm = $\mathbf{6}$ sq. cm



6. **In figure 6**.

Complete squares = 2 More than half squares = 3

Less than half squares = 3 (ignore) \therefore Area of the figure = 2 + 3 = 5 sq. cm



HOTS QUESTION

Find the area of this shape:

ſ											Г			
ľ														
			/	1	2	3	4	5						
				//	6	7	8	9	10					
						11	12	13	14	15				

$$HalfSquare = 6$$

$$\therefore \text{ Area of this shape} = \left(15 + 6 \times \frac{1}{2}\right) \text{ sg.cm}$$

$$= (15 + 3) \text{ sg.cm}$$



When the side of a square is doubled, the perimeter increases **two** times, while the area increases **four** times.

Exercise 14.4

A. Solve these story sums.

1. Length of park
$$=$$
 42 m
Breadth of park $=$ 32 m

$$\therefore$$
 Perimeter of park = 2 (length + breadth)

$$=$$
 2 (42 + 32) m $=$ 2 × 74 m $=$ 148 m

∴ Cost of one metre of fencing
$$=$$
 ₹50.

So, the cost of 148 metre of fencing
$$=$$
 $₹(50 \times 148)$ $=$ $₹7400$.

2. Perimeter of square field
$$= 520 \text{ m}.$$

Perimeter of square field
$$=$$
 4 \times side \therefore Side of the field $=$ Perimeter

$$= \frac{520}{4} \, \text{m} = 130 \, \text{m}$$

4

So, the area of the square field
$$= (side)^2$$

$$= 130 \times 130 \text{ cm}^2 = 16900 \text{ m}^2.$$

$$\therefore$$
 Perimeter of rectangular park = 2 (1 + b) = 2 (30 + 22) m

$$= 2 \times 52 \text{ m} = 104 \text{ m}$$

So, distance covered by Rahul in 3 rounds
$$= 3 \times 104 \text{ m} = 312 \text{ m}$$
.

$$\therefore$$
 Area of the wall = $1 \times b$ = $4.5 \times 6 \text{ m}^2$

$$=$$
 27 m².

 \therefore Area of a brick = $1 \times b$

 $= 24 \times 15 \text{ cm}^2 = 360 \text{ cm}^2$

So, the area of the path = area of 100 bricks = $100 \times 360 \text{ cm}^2$

 $= 36000 \text{ cm}^2 \text{ or } 3.6 \text{ m}^2$

6. Length of tiles = 8 cm Breadth of tiles = 5 cm

 \therefore Area of a tile = $8 \times 5 \text{ cm}^2$ = 40 cm^2

Length of bath room = 400 cm^2 Width of bath room = 200 cm^2

 \therefore Area of bath room = $400 \times 200 \text{ cm}^2$ = 80000 cm^2

So, the required number of tiles = $\frac{\text{Area of bathroom}}{\text{Area of a tile}} = \frac{80000}{40} = 2000 \text{ tiles}$

Tricky Maths

- 1. The distance around a figure is called its **perimeter**.
- 3. The area of a square is given as (side)².
- 5. Area of a figure is measured in **sq. unit**.
- The formula for the perimeter of a rectangle is
 2 × (length + breadth).
- 4. The formula for the perimeter of a square is **4 side**.
- 6. The number of 1 cm squares that can fit in a rectangle of area 14 sq cm is 14.

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (a)

3. (b)

4. (a)

NEP The 4Cs: Core Learning Skills

Next week, Mr and Mrs Verma are shifting to a new home, with the help of the floor plan answer the following questions.

1. What is the area of the living room?

 $(15 \times 18) \text{ sq. ft} = 270 \text{ sq. ft}$

2. What is the area of the master bedroom?

- (20×11) sq. ft = 220 sq. ft
- 3. Mr Verma's son will have the room that has an area 114 square feet. Which is his room? What are the dimensions of the room?

 Bedroom 'A', : Dimensions = $12 \text{ ft} \times 9.5 \text{ ft}$
- 4. Mr Verma's daughter gets the bedroom that is 126 square feet. Which is her room? What are the dimensions of the room?

 Bedroom 'B', ; Dimensions = 12 ft × 10.5 ft
- 5. What is the area of the kitchen?

 $(7.5 \times 11) \text{ sq. ft} = 82.5 \text{ sq. ft}$

6. What is the area of the dining room?

 (10.5×11) sq. ft = 115.5 sq. ft

7. What is the area of the bathroom?

 $(6 \times 9) \text{ sq. ft} = 54 \text{ sq. ft}$

8. What is the total area of the new house?

 (38×26) sq. ft = 988 sq. ft

Volume and Nets

Roll Back

What is the shape of each object? Write CUBE or CUBOID.

1.



2.



3.



4.



Cuboid

Cube

Exercise 15.1

Α. Find the volume if each small cube measures 1 cu. cm.

1. In figure 1.

> Volume = $side \times side \times side$ $= 2 \text{ cm} \times 2 \text{ cm} \times 3 \text{ cm}$ = 12 cu. cm

3. In figure 3.

Volume = $side \times side \times side$ $= 4 \text{ cm} \times 5 \text{ cm} \times 1 \text{ cm}$ = 20 cu. cm

5. In figure 5.

> $Volume = side \times side \times side$ $= 4 \text{cm} \times 3 \text{cm} \times 4 \text{cm}$ = 48 cu. cm

7. In figure

> Volume = $side \times side \times side$ $= 4 \text{ cm} \times 3 \text{ cm} \times 3 \text{ cm}$ = 36 cu. cm

2. In figure 2

> Volume = $side \times side \times side$ $= 3 \text{ cm} \times 4 \text{ cm} \times 1 \text{ cm}$ = 12 cu. cm

4. In figure 4.

> Volume = $side \times side \times side$ $= 4 \text{ cm} \times 4 \text{ cm} \times 2 \text{ cm}$ = 32 cu. cm.

6. In figure 6.

Volume = $side \times side \times side$ $= 4 \text{ cm} \times 4 \text{ cm} \times 4 \text{ cm}$ $= 64 \,\mathrm{cu.\,cm}$

8. In figure 8.

> Volume = $side \times side \times side$ $= 2 \text{ cm} \times 3 \text{ cm} \times 4 \text{ cm}$ = 24 cu. cm

В. Count the number of cubes and find the volume in cu. Cm.

In fig 1.

Total number of cubes = 10 $= 1 \text{ cm}^3$ Volume of one cube .: Total volume $= 10 \times 1 \text{ cm}^3$ $= 10 \text{ cm}^3$

3. In fig 3.

> Total number of cubes = 36Volume of one cube $= 1 \text{ cm}^3$ $= 36 \times 1 \text{ cm}^3$.. Total volume $= 36 \text{ cm}^3$

2. In fig 2.

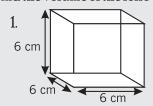
Total number of cubes 14 $= 1 \text{ cm}^3$ Volume of one cube : Total volume $14 \times 1 \text{ cm}^3$ 14 cm^3

4. In figure 4.

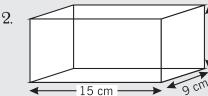
Total number of cubes 32 $= 1 \text{ cm}^3$ Volume of one cube $= 32 \times 1 \text{ cm}^3$.: Total volume 32 cm^3

Let's Do≡

Find the volume of the following:



Volume = $6 \times 6 \times 6$ = 216 cu. Cm Volume 216 cm



Volume = $I \times b \times h$ 12 cn $= 12 \times 15 \times 9 \text{ cm}^3$ = 1620 cu. cm = 1620 Cu. cm

Exercise 15.2

2.

A. Find the volume of these objects.

- 1. Length of Butter box = 10 cmBreadth of Butter box = 6 cm
 - Height of Butter box = 2 cm \therefore Volume of butter box = $1 \times b \times h$

 $= (10 \times 6 \times 2) \text{ cu. cm}$

 $= 120 \, \mathrm{cu.cm}$

Breadth of pencil box = 5 cmHeight of pencil box = 2 cm \therefore Volume of pencil box = $1 \times 6 \times 6$

Length of pencil box $= 10 \, \text{cm}$

= $(10 \times 5 \times 2)$ cu. cm = **100 cu. cm**

3. Length of crayons box = 12 cmBreadth of crayons box = 8 cm

Height of crayons box = 3 cm

 \therefore Volume of crayons box = $(12 \times 8 \times 3)$

cu. cm

 $= 288 \,\mathrm{cu.\,cm}$

4. Length of gift box = 6 cmBreadth of gift box = 5 cmHeight of gift box = 4 cm

 \therefore Volume of gift box = length \times breadth

× height

 $= (6 \times 5 \times 4) \text{ cu. cm}$

= 120 cu. cm

5. Length of match box = 5 cm

Breadth of match box = 2 cmHeight of match box = 1 cm

 \therefore Volume of match box = $(5 \times 2 \times 1)$ cu. cm

= 10 cu. cm

6. Length of packet = 15 cmBreadth of packet = 3 cmHeight of packet = 2 cm

> :. Volume of the packet = $(15 \times 3 \times 2)$ cu. cm = **90 cu. cm**

B. Find the volume of solids of the given dimensions.

1. In figure 1.

Length = 8 cm, breadth = 10 cm, height = 4 cm

 $\therefore Volume of solids = 1 \times b \times h$

 $= (8 \times 10 \times 4) \text{ cu. cm}$

 $=320\,\mathrm{cm.\,cm}$

2. In figure 2.

 $Side = 10 \, cm$

 \therefore Volume of solids = side \times side \times side

 $= (10 \times 10 \times 10) \text{ cu. cm}$

 $= 1000 \, \text{cu. cm}$

3. In figure 3. Length = 15 cm; breadth = 12 cm; height = 8 cm

Volume of solid $= 1 \times b \times h$

= $(15 \times 12 \times 8)$ cu. cm

 $= 1440 \,\mathrm{cu.\,cm}$

C. Find the volume of each of the following.

Length	Breadth	Height	Volume
9 mm	7 mm	6 mm	Volume = $L \times b \times h$ $V = (9 \times 7 \times 6) \text{ mm}^3 = 378 \text{ cu. mm}$
12.5 cm	10 cm	8 cm	Volume = $L \times b \times h$ $V = (12.5 \times 10 \times 8) \text{ cm}^3 = 1000 \text{ cu. cm}$
9.6 m	8 m	6 m	Volume = $L \times b \times h$ $V = (9.6 \times 8 \times 6) \text{ m}^3 = 460.8 \text{ cu. m}$
12.4 m	9 m	7 m	Volume = $L \times b \times h$ $V = (12.4 \times 9 \times 7) \text{ m}^3 = 781.2 \text{ cu. m}$
52 cm	29 cm	14 cm	Volume = $L \times b \times h$ $V = (52 \times 29 \times 14) \text{ cu cm} = 21112 \text{ cu.cm}$

D. Solve these story sums.

3.

Example 1. Length of aquarium = 30 cm

Breadth of aquarium = 30 cm

Height of aquarium = 50 cm

 \therefore Volume of the aquarium = $L \times b \times h$

= $(30 \times 30 \times 50)$ cu. cm

= 45000 cu. cm.

2. Side of each cube = 5 cm

 \therefore Volume of cube = side \times side \times side

 $= (5 \times 5 \times 5) \text{ cu. cm} = 125 \text{ cu. cm}$

So, the volume of 20 ice-cubes $= (125 \times 20)$ cu. cm = 2500 cu. cm = 22 cm

Breadth of ice-cream = 10 cm
Height of ice-cream = 8 cm

 \therefore Volume of ice-cream brick = $L \times b \times h$

= (22 × 10 × 8) cu. Cm = 1760 cu. cm

4. Length of refrigerator = 80 cm
Width of refrigerator = 40 cm
Height of refrigerator = 90 cm

 \therefore Volume of the refrigerator = Length \times width \times hight = $(80 \times 40 \times 90)$ cu. cm

= 288000 cu. cm

Hence, the volume of Swati's refrigerator is 288000 cu. cm.

5. Length of room = 10 mWide of room = 8 mHeight of room = 12 m

 \therefore Volume of air is the room = length \times width \times height

 $= (10 \times 8 \times 12) \text{ cu. m} = 960 \text{ cu. m}.$

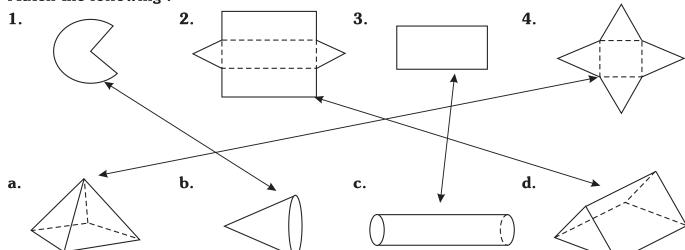
Roll along the direction of the arrow or fold along the dotted lines. Then match each net with its correct shape. 1. 2. 5. 4. d. d.

Exercise 15.3

A. Which of the following can be folded to make an open cubical box?

Solution. 1,3,5

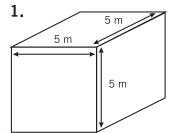
B. Match the following:

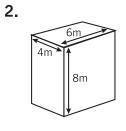


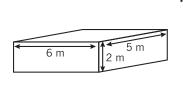
NEP Development of Traditional Knowledge

Now find the volume of these cubes and cuboids by using the formula $V = I \times b \times h$:

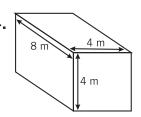
	Length	Breadth	Height	Volume $= l \times b \times h$
1.	5m	5m	5m	= $(5 \times 5 \times 5) \text{ m}^3$ = 125 cu. m
2.	6m	4m	8m	= $(6 \times 4 \times 8) \text{ m}^3$ = 192 cu. m
3.	6m	5m	2m	= $(6 \times 5 \times 2) \text{ m}^3$ = 60 cu. m
4.	8cm	4cm	4cm	= $(8 \times 4 \times 4) \text{ m}^3$ = 128 cu. m
5.	10m	10m	10m	= $(10 \times 10 \times 10) \text{ m}^3$ = 1000 cu. m
6.	15m	6m	5m	= $(15 \times 6 \times 5) \text{ m}^3$ = 450 cu. m

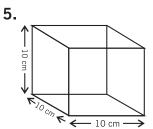


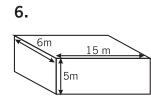




3.







Worksheet

This cut-out can be folded to make a cube.
 Given below are some options.
 Circle the correct cubes.



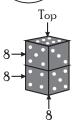








2. What is the sum of the numbers on the faces of the dice touching each other? What is the sum of the numbers on the top and the bottom? Sum of the number on the faces of the dice touching each other = 6 + 1 = 7 Sum of the number on the top and bottom = 6 + 1 = 7



Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

1. (c)

2. (c)

3. (a)

Chapter



Symmetry and Patterns

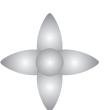
Roll Back

A. Ring the shapes that do not have symmetry:

1.



2.



3.



4.



B. Draw the line of symmetry:

1.



2.

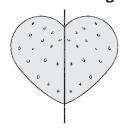


3.

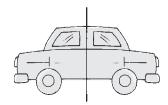


C. Draw the mirror image and colour it:

1.



2.

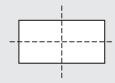


3.

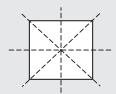


Let's Do≣

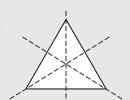
Draw the lines of symmetry in the following shapes.



2.



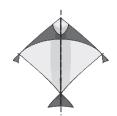
3.



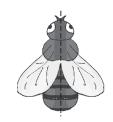
Exercise 16.1

Draw the lines of symmetry for these shapes. A.

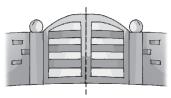
1.



2.



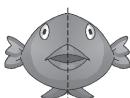
3.



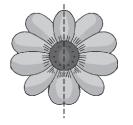
4.



5.



6.



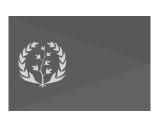
Find the number of lines of symmetry in each of the following shapes. В.

1.



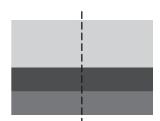
Two lines of symmetry

2.



No lines of symmetry

3.



One line of symmetry

C. Complete the figures treating the dotted line as the line of symmetry.

1.

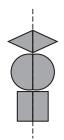


2.



6.

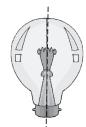
3.

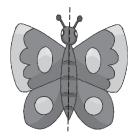


4.



5.





Exercise 16.2

A. Give each shape a quarter turn to complete the pattern.

	SHAPE	$rac{1}{4}$ Turn	$rac{1}{4}$ Turn	$\frac{1}{4}$ Turn
1.		→	—	→
2.		→	→	→
3.		→ ((→ ○	→)
4.		\rightarrow \subset	→	→ >

B. Give each shape half a turn.

C. What will come next?

Let's Do

Complete the pattern.

- 1. 11×11=121 111×111=12321 1111×1111=1234321 11111×11111= **123454321** 111111×111111= **12345654321**
- 2. $37 \times 3 = 111$ $37 \times 6 = 222$ $37 \times 9 = 333$ $37 \times 12 = 444$ $37 \times 15 = 555$
- 3. $1+3=4=2\times2$ $1+3+5=9=3\times3$ $1+3+5+7=16=\mathbf{4}\times\mathbf{4}$ $1+3+5+7+9+11=\mathbf{6}\times\mathbf{6}$ $=\mathbf{36}$

A. What rule is followed to get the following patterns? What are the next two numbers in each pattern.

B. Write the multiplication table of 6 and find out the pattern it follows.

	Table of 6						Pattern								
6	×	1	=	6		X	+	6	=	Y	6	+	6	=	12
6	×	2	=	12		Y	+	6	=	Z	12	+	6	=	18
6	×	3	=	18		Z	+	6	=	Α	18	+	6	=	24
6	×	4	=	24		Α	+	6	=	В	24	+	6	=	30
6	×	5	=	30		В	+	6	=	С	30	+	6	=	36
6	×	6	=	36		C	+	6	=	D	36	+	6	=	42
6	×	7	=	42											

C. Find any two numbers which are both triangular and square numbers.

$$36 = 6 \times 6 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8$$
 and $1 = 1 \times 1$

Hence, 1 and 36 are two numbers which are both triangular and square numbers.

D. Fill in the blanks with triangular numbers and find the sum.

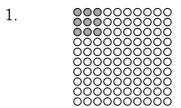
1.
$$\mathbf{1} + 3 + 5 + \mathbf{7} = \mathbf{16}$$

2.
$$\mathbf{1} + 3 + 5 + \mathbf{7} + 9 + \mathbf{11} = \mathbf{36}$$

What do you notice about the sums?

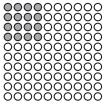
The sum of x, odd numbers is the square of x.

E. Complete the pattern by shading dots. One is done for you.



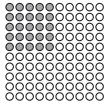
9

2.



16

3.



25

Mental Maths Corner (MCQ's)

Tick (✓) the correct answer.

NEP Adaptive Education

Number	Traffic sign	Meaning	Symmetry Yes/No	Looks the same on a turn * Yes/No	Kind of turn needed $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$ or $\frac{1}{4}$
1.		No stopping or Standing	Yes	Yes	$\frac{1}{4}$

2.	0	No Parking	Yes	Yes	1/2
3.		Compulsory ahead	Yes	No	1
4.		Stop	Yes	Yes	1/8
5.		Give way	Yes	Yes	1/3

Chapter 17

Data Handling

Roll Back

- A. Answer the following questions:
 - 1. **Sonam** read the most number of books.
 - 2. **Rohit and vicky** read the same number of books.
 - 3. Sonam read 4 books more than vicky
- B. Make a pictograph using the information given below. Explain your symbol and give a title to the pictograph.

Class	Number of students admitted
VI	99999999999999999
VII	© © © © ©
VIII	999999
IX	
X	
XI	99999999999
XII	

 $\stackrel{\circ \circ}{=} 5$ students

A. Complete the following tally charts.

Fruits	Tally Marks	Frequency
Mango	Шишиш	18
Papaya	шити	12
Grapes	ШИТИТ	14
Apple	ШШШ	16

B. The following is the data of flavours of juices liked by 30 students of class V.P stands for pine apple juice, O for orange juice, M for mango juice, S for sugarcane juice and C for carrot juice.

Fruits	Tally Marks	Frequency
Р	THI II	7
0	JHI	5
М	ШИТ	9
S	THI II	7
С		2

- 1. Mango flavour juice is liked most by 9 students.
- 2. Carrot flavour juice is liked least by 2 students.
- 3. Papaya and sugarcane flavours are liked by equal number of students.
- 4. 5 students like orange juice.

C. The number of telephone calls made by a sales officer on five different days is down in the following pictograph.

1. Total number of calls = 40 + 35 + 30 + 30 + 30

= 165 calls

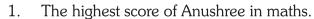
- 2. Monday, 40 calls
- 3. Cost of one call = ₹2
 - ∴ Cost of 165 calls = ₹2 × 165
 - = ₹330

D. Draw a pictograph to represent the following data.

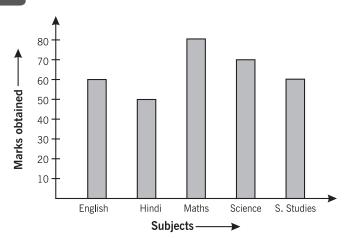
Subject		Marks															
Maths	M	M	M	M	M N	и м	M	M	M	M	M	M	M .	M M	M	M	M
English	En	En	En	En	En	En	En	En	En	En	En	En	En	En	En	En	En
Science	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		
Evs	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	Ev	
Hindi	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н		
Computer	С	С	С	С	С	С	С	С	С	С	С	С	C (СС	С	С	С

Exercise 17.2

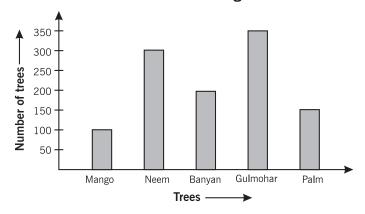
A. The marks obtained by Anushree in the olympiad exams is shown using a bar graph. Read the graph carefully and answer the following questions:



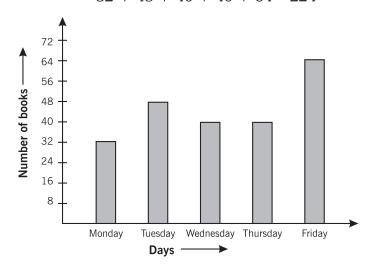
- 2. Anushree scored 60 marks in English and 60 marks in S. Studies.
- 3. Anushree scored 70 marks in Science.



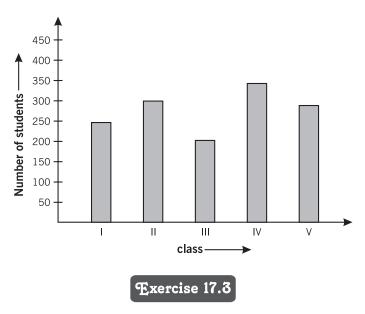
B. The number of trees of different types planted inside the gardens of the town is shown in the following table:



- C. The bookshop sells a certain number of books on five days of the week as follows:
 - 1. Wednesday and Thursday
 - 2. Total number of books sold =32 + 48 + 40 + 40 + 64 = 224



D. The following data is about the number of students in class I to V in a school.



- A. The students of class V voted for their favourite fruit. The data has been represented as a pie-graph given below. Study the pie graph and answer the following questions.
 - 1. Most popular fruit is Apple.
 - 2. Least popular fruit Guava.
 - 3. Banana is more popular than mango.
 - 4. Guava < Mango < Banana < Apple.
- B. A survey was conducted about the kinds of books popular among the students. The data has been represented as a pie-graph given below. Study the pie graph and answer the questions given below.
 - 1. Sports books are most popular among students.
 - 2. Horror stories are least popular among students.
 - 3. Adventure stories are more popular than science books.
 - 4. Sports Books > Adventure stories > Science Books > Comics > Horror stories.

NEP Multiple Intelligence

Do it yourself.



	Note	
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	411	MATHEMATICS-5



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