Edu Bridge

Help-kit
1-5

Teacher's Manual

Maths

Chapter

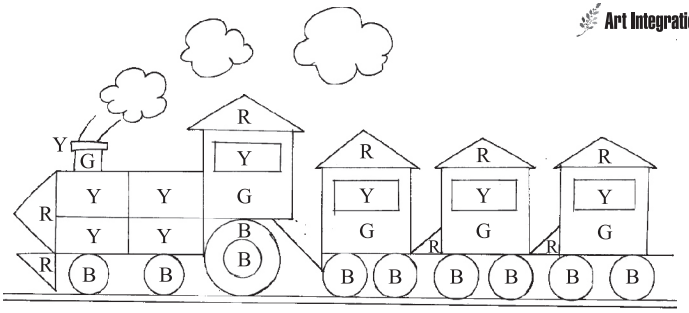
1 Shapes and Space

Let's Recall

Look at the picture given below. Count the number of each shape and fill in the boxes. Also, colour the shapes as asked.

Ans.

Art Integration

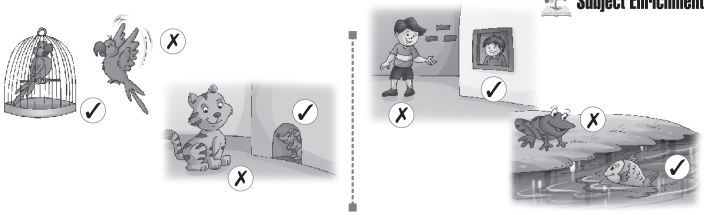


Inside and Outside

Tick (✓) the ones that are inside and cross (✗) the ones that are outside.

Subject Enrichment

Ans.



Top and Bottom

Tick (✓) the ones that are on the top and cross (✗) the ones that are at the bottom.

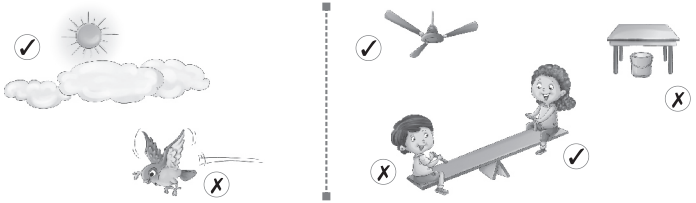
Writing Skills

Ans.

Above and Below

Tick (✓) the ones that are above and cross (✗) the ones that are below.

Ans.

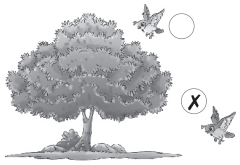


Near and Far

Integrated Approach

Tick (✓) the dog near the bone.

Cross (✗) the bird far away from the tree.



Tick (✓) the player near to the ball.

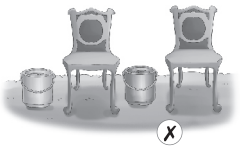
Before, After and Between

Functional Skills

Tick (✓) the player before the wickets.

Circle (◯) the cup after the plate.

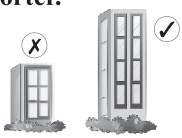
Cross (✗) the bucket between the chairs.

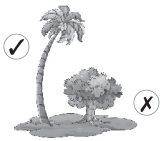


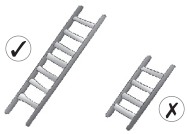
Taller and Shorter

Communication

Tick (✓) the ones that are taller and cross (✗) the ones that are shorter.



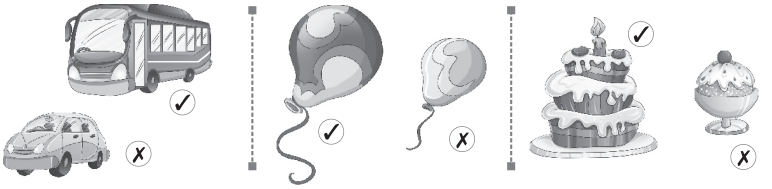




Bigger and Smaller

Tick (✓) the ones that are bigger and cross (✗) the ones that are smaller.

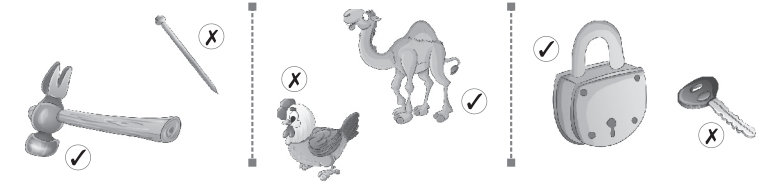
Collaboration



Heavier and Lighter

Tick (✓) the ones that are heavier and cross (✗) the ones that are lighter.

Development of Traditional Skills



Longer and Shorter

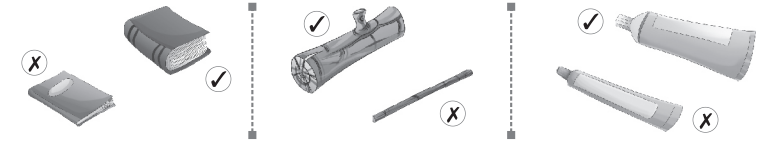
Tick (✓) the ones that are longer and cross (✗) the ones that are shorter.

Life Skill and Values

Thicker and Thinner

Tick (✓) the ones that are thicker and cross (✗) the ones that are thinner.

Experimental Learning



Plane Shapes

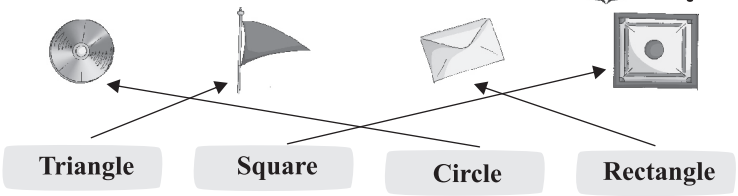
Trace the following shapes and name them.

Art Integration

Oval | Square | Triangle | Circle | Rectangle

Match the following :

Knowledge of India



Triangle | Square | Circle | Rectangle

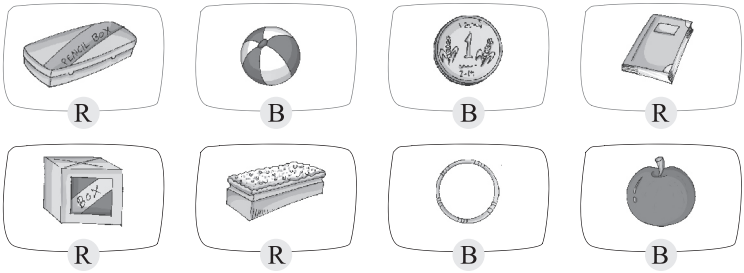
Solid Shapes

Identify the given solid shape

Cube | Cone | Cylinder | Sphere

Rolling and Sliding

Colour the box red for things that slide and blue for things that slide and roll both.



MCQs

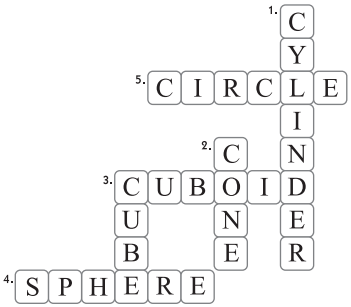
Choose the correct option. Creative Thinking

Ans. 1. a 2. a 3. c

NEP

Complete the crossword with the names of the solid shape. Life Skill and Values

Ans.



Chapter 2

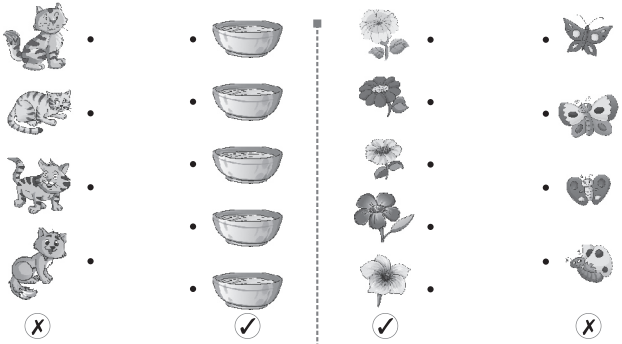
Numbers from 1 to 9

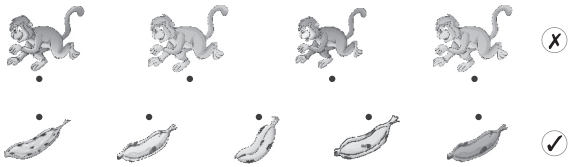
Let's Recall

Matching and Pairing

Match the objects to form pairs. Tick (✓) the group that has more and cross (✗) the one that has less. Practical Knowledge

Ans.





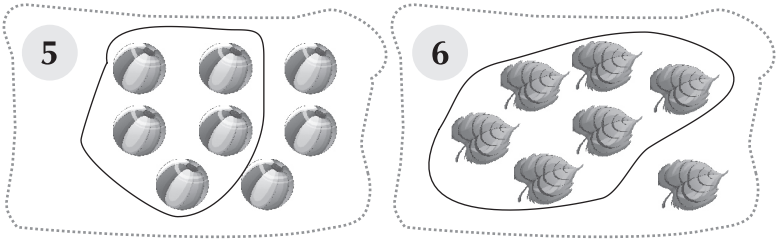
Numbers from 1 to 9

Count and write the numbers from 1 to 10.

Art Integration

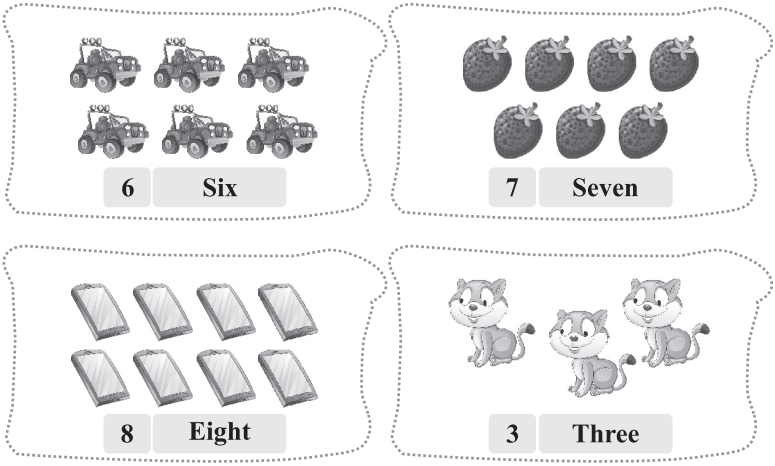
Do it yourself.

Circle as many objects as the given number.



Making Group

Count and write the number and its number name.



Count and Colour

Art Integration

Colour 5 faces
Do it yourself.

Colour 7 faces
Do it yourself.

Colour 3 circles
Do it yourself.

Colour 2 flowers
Do it yourself.

Colour 6 apples
Do it yourself.

Colour 4 trees
Do it yourself.

Colour 9 birds
Do it yourself.

Understanding Zero

How many mangoes are there in the two baskets? Critical Thinking
Write the numbers in the boxes below.

4

0

Colour the cloud that has zero objects.

Write the number.

before		after		in between		
5	6	0	1	1	2	3

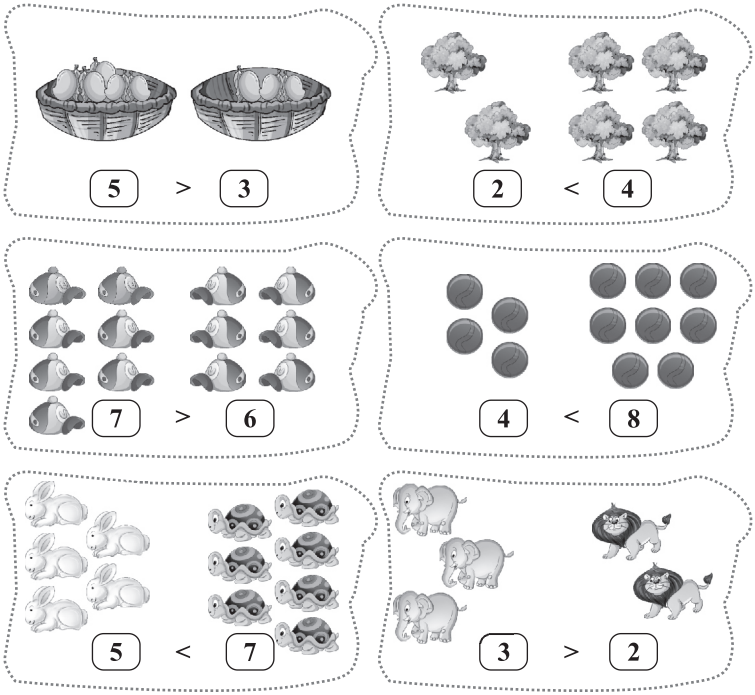
8	9
7	8
1	2

7	8
5	6
8	9

3	4	5
6	7	8
7	8	9

Comparison of Numbers

Count the number of objects and put >, < or = sign. Collaboration



Tick (✓) the smallest number in each group. Communication

1 ✓	2	3
4 ✓	6	9
6	3 ✓	7

3 ✓	5	7
2 ✓	9	6
1 ✓	2	7

Tick (✓) the biggest number in each group.

7✓	3	1	9✓	4	0
6✓	3	2	1	4	5✓
3	4✓	2	5	6	8✓

Increasing and Decreasing order

Arrange these numbers in.

Practical Knowledge

	Increasing order						Decreasing order					
1 5 0 8 7	0	1	5	7	8		6 3 2 5 1	1	2	3	5	6
4 8 7 9 2	2	4	7	8	9		2 0 4 1 3	0	1	2	3	4
5 8 9 6 3	3	5	6	8	9		2 0 5 9 7	0	2	5	7	9

MCQs

Choose the correct option.

Creative Thinking

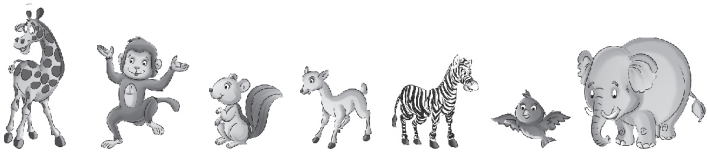
Ans. 1. c 2. a 3. a 4. b
5. 8 6. c 7. a

NEP

Collaboration

Look at the picture given below, count and write how many.

Ans.



2	6	7	4	3	1	1

Chapter

3 Addition

Let's Recall

Collaboration

Count and write how many are there.

Ans. 3 birds flying and 3 birds on the tree equals 6 birds.

3 boys and 2 girls equals 5 children.

4 ducks in the water and 3 ducks outside the water equals 7 ducks.

Introduction to Addition

How many in all? Count and write. Critical Thinking

Ans.

 and  is  2 + 4 = 6

 and  is  3 + 4 = 7

 and  is  4 + 1 = 5

Higher Order Thinking Skills (HOTS)

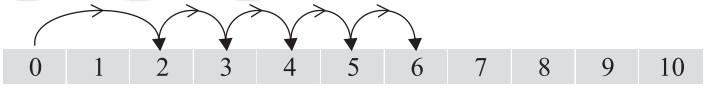
Circle the correct pair of numbers that add up to the number which kim is holding.

Ans.

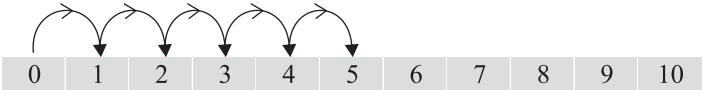
8	5	6	9
6 + 1	3 + 7	6 + 1	4 + 5
3 + 5	3 + 1	4 + 2	3 + 7
5 + 4	3 + 2	3 + 4	6 + 3

Now, use the number strip and add the following. Analytical Skills

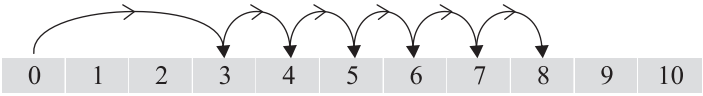
Ans. 2 + 4 = 6



1 + 4 = 5



3 + 5 = 8



Properties of Addition

Adding Zero Practical Knowledge

Now, try this.

Ans.

4 + 0 + 4

Adding One Writing Skills

Now, try this.

Ans.

4 + 1 + 5

Order in Addition

Now add these.

Ans.

5 + 4 = 9 is same as 4 + 5 = 9

2 + 1 = 3 is same as 1 + 2 = 3

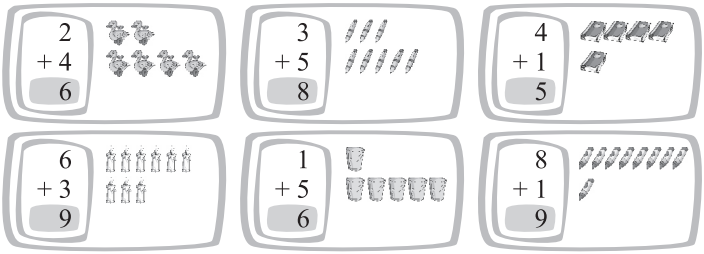
4 + 2 = 6 is same as 2 + 4 = 6

7 + 2 = 9 is same as 2 + 7 = 9

Vertical (Column) Addition

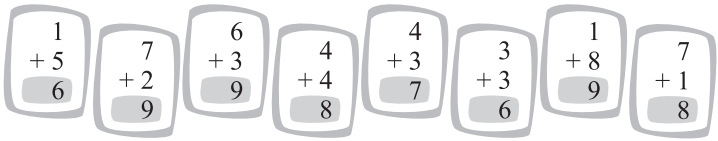
Add the following : Subject Enrichment

Ans.



Add these numbers. Coordination in Writing and Reading

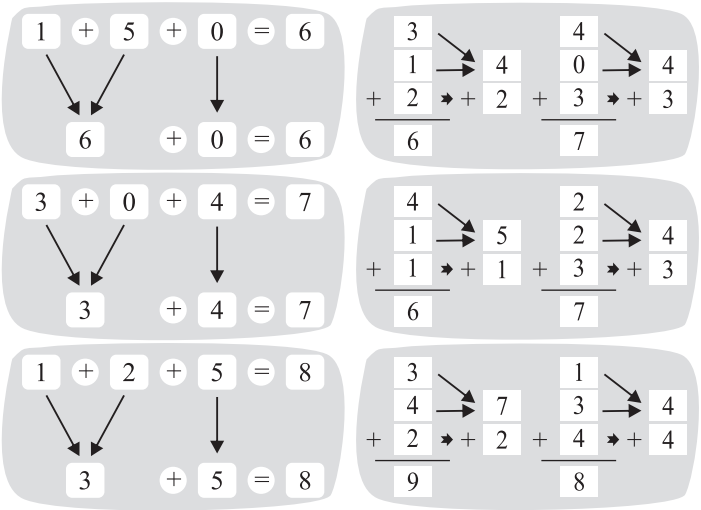
Ans.



Adding Three Numbers

Add the following. Experiential Learning

Ans.



Word Problems

Solve the following word problems. Practical Knowledge

Ans.

1. There are 4 cookies on a plate. Zahira added 2 more cookies. How many cookies are there in all?

4 ||||
+ 2 ||
6

Answer ☺ **:** There are (6) cookies on the plate in all.

2. Krish has 1 football. Vikas has 5 footballs. How many footballs do they have in all?

1 |
+ 5 |||||
6

Answer ☺ **:** They have (6) footballs in all.

3. There are 3 sheep in the field. 1 more sheep joins them. How many sheep are there in all?

3 |||
+ 1 |
4

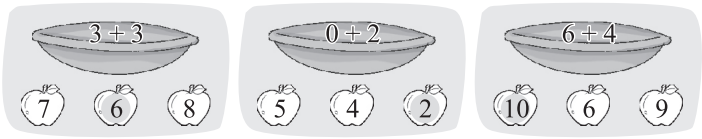
Answer ☺ **:** There are (4) sheep in all.

NEP

Integrated Approach

Help Bob find the good apple in each basket. Add the numbers in each basket. The apple with correct answer is the good apple. Colour it.

Ans.



MCQs

Choose the correct option.

Ans. 1. a 2. a 3. c 4. c

Chapter

4 Subtraction

Let's Recall

Subject Enrichment

Look at the following. Fill in the boxes.

Ans.

4 oranges in the basket.

1 orange is eaten.

Now 3 oranges are left.

There are 5 birds.

2 birds fly away.

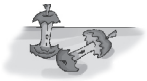
Now 3 birds are left.

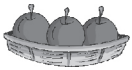
Introduction to Subtraction

Practical Knowledge

Now, take, away and write the answer.

Ans.





5 – 2 = 3

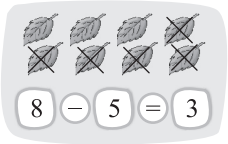
3 – 2 = 1

Subtraction by Crossing out

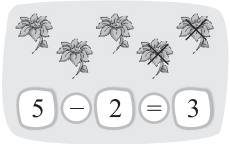
Problem Solving and Decision Making

Cross out to subtract and fill in the box.

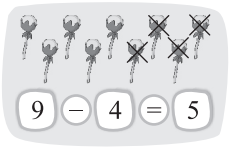
Ans.

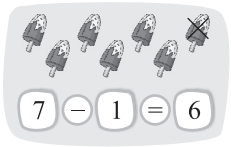


8 – 5 = 3



5 – 2 = 3



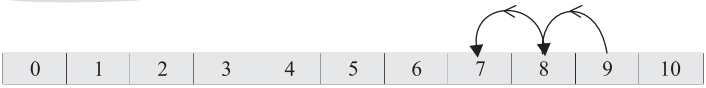


Subtract the following using the number strip. Art Integration

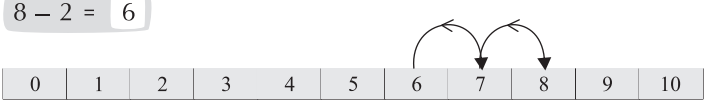
Ans.

5 – 4 = 1

9 – 2 = 7



8 – 2 = 6



Properties of Subtraction

Subtraction 1

Try this.

Ans. 5 – 1 = 4

Subtracting a Number from Itself

Try this.

Ans. 4 – 4 = 0

Subtracting the following. Problem Solving and Decision Making

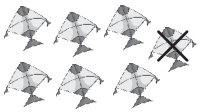
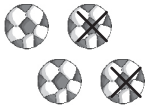
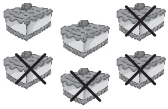
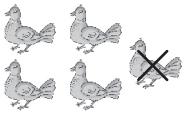
Ans.

4 – 1 = 3	7 – 7 = 0	1 – 1 = 0	9 – 0 = 9
9 – 9 = 0	2 – 0 = 2	6 – 1 = 5	3 – 1 = 2

Vertical Subtraction

Cross (✗) out and subtract. Cross-Curricular Learning/Subject Integration

Ans.

7 − 1 = 6		4 − 2 = 2	
8 − 3 = 5		6 − 4 = 2	
5 − 4 = 1		5 − 1 = 4	

Subtract the following. Analytical Skills

Ans.

8 − 5 = 3	6 − 5 = 1	7 − 1 = 6	9 − 2 = 7	2 − 1 = 1	7 − 3 = 4
4 − 2 = 2	5 − 4 = 1	8 − 4 = 4	8 − 3 = 5		

Word Problems

Solve the following word problems. Practical Knowledge

Ans.

1. Jignesh had 7 crayons.He lost 2 of them. How many are left?

7 − 2 = 5

Answer ☺ **:** Jignesh has left with 5 crayons.

2. Shahana has 8 bangles. She gave 3 bangles to her sister. How many bangles are left with Shahana?

$$\begin{array}{r} 8 \\ -\ 3 \\ \hline 5 \end{array}$$

Answer ☺ **:** She has left (5) bangles with her.

3. Ishita has 9 eggs. 5 eggs are broken. How many eggs are left with Ishita now?

$$\begin{array}{r} 9 \\ -\ 5 \\ \hline 4 \end{array}$$

Answer ☺ **:** Ishita is left with (4) eggs.

4. There were 7 idlis on the plate. 4 were eaten. How many are left.

$$\begin{array}{r} 7 \\ -\ 4 \\ \hline 3 \end{array}$$

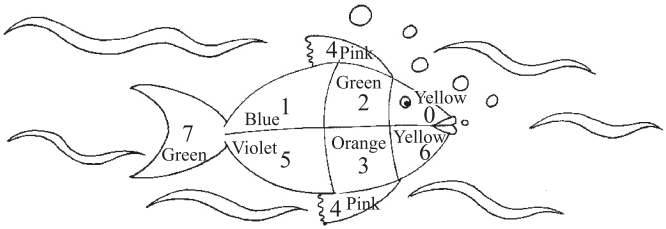
Answer ☺ **:** (3) Idlis are left.

NEP

Creative Thinking

Subtract and colour in the number fish as shown.

Ans. (5) – (1) = (4) (5) – (4) = (1) (9) – (7) = (2)
(6) – (3) = (3) (7) – (2) = (5) (1) – (1) = (0)
(10) – (3) = (7) (9) – (3) = (6)



MCQs

Choose the correct option.

Ans. 1. b **2.** c **3.** b **4.** c **5.** c

Chapter

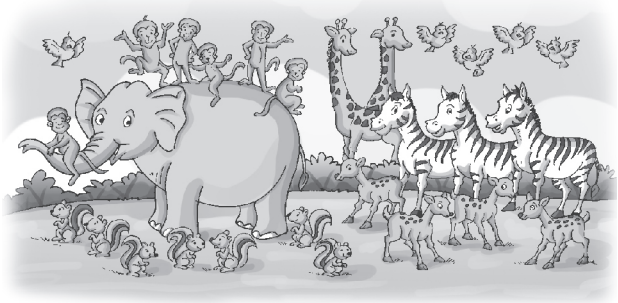
5 Numbers from 10 to 20

Let's Recall

Experience Based Knowledge

Look at the picture given below and count how many.

Ans.



1 6 7 4 2 3 5

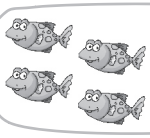
Counting

Writing Skills

Count and write the number and its number name.

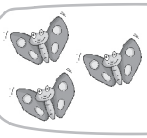
Ans.

1 One



4 Four

6 Six



3 Three

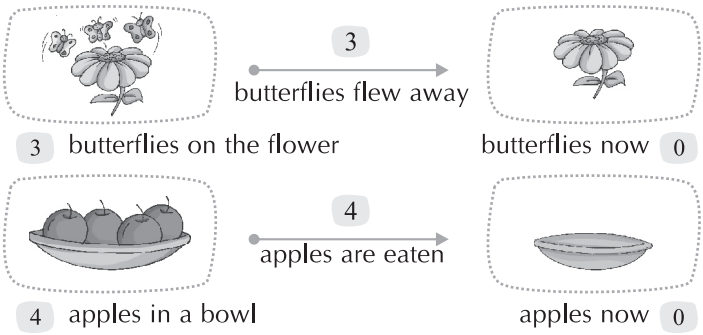
9 Nine

2 Two

Understanding Zero

Fill in the empty boxes.

Ans.



NEP

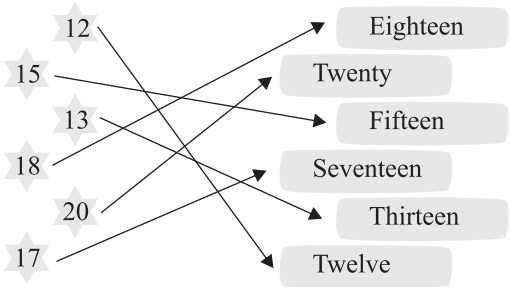
Join the numerals in sequence and colour the picture.

Ans. Do it yourself.

Building Numbers from 11 to 20

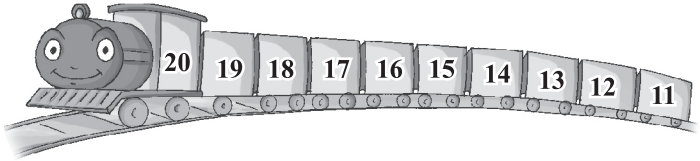
Match the numbers to the correct number names

Cross-Curricular Learning/ Subject Integration



Fill in the missing numbers.

Functional Skills



Before, After and Between

Write the number which comes just before.

Functional Skills

6	7
16	17
14	15
19	20

0	1
17	18
18	19
10	11

11	12
13	14
12	13
3	10

Write the number which comes just after.

Experimental Learning

15	**16**
17	**18**
10	**11**
14	**15**

9	**10**
18	**19**
8	**9**
13	**14**

16	**17**
11	**12**
7	**8**
19	**20**

Write the number which comes in between.

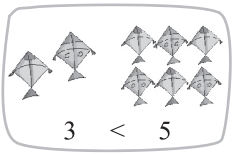
Practical Knowledge

6	**7**	8
14	**15**	16
17	**18**	19
16	**17**	18

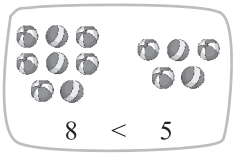
1	**2**	3
10	**11**	12
7	**8**	9
11	**12**	13

9	**10**	11
18	**19**	20
5	**6**	7
4	**5**	6

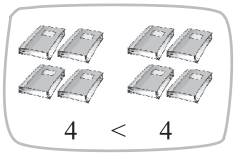
Comparison of Numbers



3 < 5



8 < 5



4 < 4

Tick (✓) the smallest number in each group.

7✓ 10 15 13	15 6✓ 9 17	8✓ 14 9 19	11 16 18 9✓

Ordering of Numbers

Arrange the numbers in. All Round Development of Skills

ascending order	descending order
5 16 8 11 → 5 8 11 16	3 5 17 19 → 13 17 5 3
13 7 4 15 → 4 7 13 15	4 10 9 15 → 15 10 9 4
2 14 6 7 → 2 6 7 14	11 20 12 18 → 20 18 12 11

Chapter

6 Time

Let's Recall

Ankit is off to school. Number the picture in the order in which he gets ready. Practical Knowledge

Ans.

6 2 1 5 4 3

Reading Time

Problem Solving and Decision Making

Read and write the time :

Ans.

2 o'clock

8 o'clock

5 o'clock

7 o'clock

1 o'clock

11 o'clock

Art Integration

Draw the hands to show the time :

Ans.

3 o'clock

2 o'clock

8 o'clock

9 o'clock

6 o'clock

10 o'clock

Higher order Thinking Skills (HOTS)

Ans. She went at 10 o'clock to bed.

Worksheet

Write the time when you do the following daily activities and prepare a time table.

Ans. Do it yourself.

Days of the Week

Write 'T' for True and 'F' for False : Writing Skills

Ans. 1. F 2. F 3. T 4. T

Unscramble the words.

Ans.

SUNDAY	FRIDAY	MONDAY
TUESDAY	WEDNESDAY	THURSDAY

Month of the Years

Fill in the blanks : Integrated Approach

Ans. March has **31** days.
A year has **12** months.
Leap year comes every **4** year.
June comes after **May**.
August is the eighth month of the year.
January is the first month of the year.
December is the last month of the year.
A leap year has **366** days.
July comes in between **June** and **August**.

Higher Order Thinking Skills (HOTS)

Find the date on which we celebrate the following days.

Ans.

Republic day	**26 January**
Independence day	**15 August**
Christmas day	**25 December**
New year	**1 January**
Gandhi Jayanti	**2 October**
Children's Day	**14 November**

MCQs

Choose the correct option.

Ans. 1. b 2. a 3. a 4. b

Help Rony to find the months of the year in the words search.

Ans.

J	A	N	U	A	R	Y	A	N	G	J	T	M	T	L
P	A	G	N	P	I	K	A	D	A	U	G	U	S	T
I	T	M	S	R	O	S	E	E	P	L	T	M	B	R
P	Q	R	S	I	M	A	R	C	H	Y	T	U	V	R
N	O	V	E	L	A	B	E	E	R	S	J	K	L	M
I	F	P	Q	S	Y	M	N	M	O	E	O	T	S	T
W	E	D	N	E	S	A	D	B	S	P	C	S	S	S
M	B	N	S	D	A	S	Y	E	X	T	T	X	W	N
H	R	Y	J	U	N	E	O	R	M	O	O	M	S	I
G	U	E	Y	C	U	P	T	T	T	B	B	X	X	P
D	A	T	U	X	T	T	R	M	K	E	E	I	O	P
C	R	S	N	O	V	E	M	B	E	R	R	A	Y	I
J	Y	N	E	Y	C	M	U	O	I	Y	Z	P	O	P
S	A	T	U	R	D	B	Y	A	K	M	T	R	X	S
T	H	U	S	R	D	E	Y	O	P	M	A	R	T	C
J	U	M	E	J	X	R	B	R	E	R	S	J	A	N

Chapter

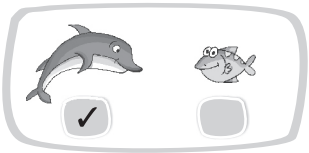
7 Measurement

Let's Recall

Subject Enrichment

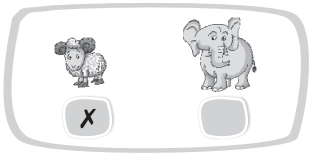
1. Tick (✓) the bigger.

Ans.



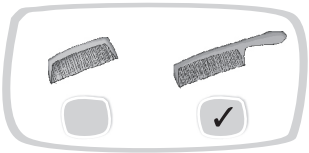
2. Cross (✗) the shorter.

Ans.



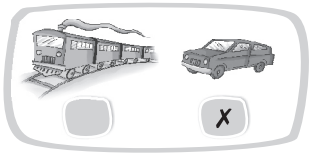
3. Tick (✓) the longer.

Ans.



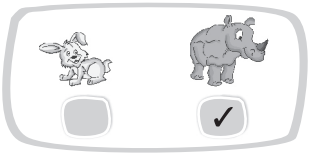
4. Cross (✗) the shorter.

Ans.



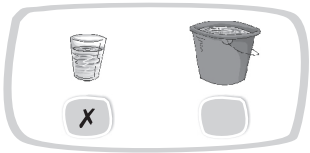
5. Tick (✓) the heavier.

Ans.



6. Cross (✗) the lighter.

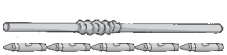
Ans.



Measuring Length

How long are these? Count and write. Writing Skills

Ans.



about 5 crayons long.

about 3 crayons long.

about 5 crayons long.

about 4 crayons long.

Measure the following objects using body parts. Use actual objects.

Ans. Do it yourself. Experimental Learning

Measuring Weight

Colour the heavier fish blue and lighter fish brown : Art Integration

Ans. Do it yourself.

Circle (◯) the heavy thing and cross out (✗) the light thing. Tick (✓) if both the things are of the same weight.

Ans.

✓ ✓ ✗ ◯ ✗ ◯

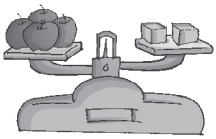
Weighting Things

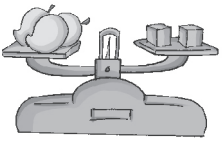
Problem Solving and Decision Making

Look at the balances and fill in the blanks.

Ans.

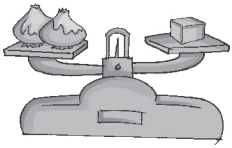
Four apples weigh the same as **2 weigh** blocks.





3 mangoes weigh the same as **2 weigh** blocks.

2 garlic bulbs weigh the same as **1 weigh** block.



Measuring Capacity

Subject Enrichment

Fill in the blanks.

Ans.

The jug can hold 3 glasses of water.

The thermos can hold 2 glasses of water.

So, the capacity of the jug is **more** than that of the thermos.

The tub can hold 8 mugs of water.

The bucket can hold 10 mugs of water.

So, the capacity of the tub is **less** than that of the bucket.

Observe the following objects in your kitchen, bathroom and refrigerator. Practical Knowledge

Ans.

Cup | Spoon | Bucket | Mug | Cold drink | Cattle

Compare and write the name of objects in appropriate column :

Ans.

Object	More Capacity	Less Capacity
Cup Bucket	Bucket	Cup
Cold drink bottle Kettle	Kettle	Cold drink bottle
Mug Spoon	Mug	Spoon
Cup Cold drink bottle	Cold drink bottle	Cup

NEP Experiential Learning

Welcome to the National Park. Think and circle the correct animal.

Ans. Who is heavier?

Who is longer?

Which has more water?

Who is lightest?

Who is tallest?

MCQs

Critical Thinking

Choose the correct option.

Ans. 1. c 2. c 3. c 4. b

Chapter

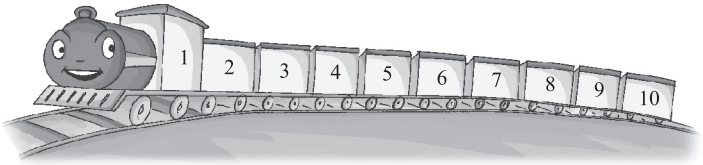
8 Numbers from 20 to 50

Let's Recall

1. Write the missing numbers.

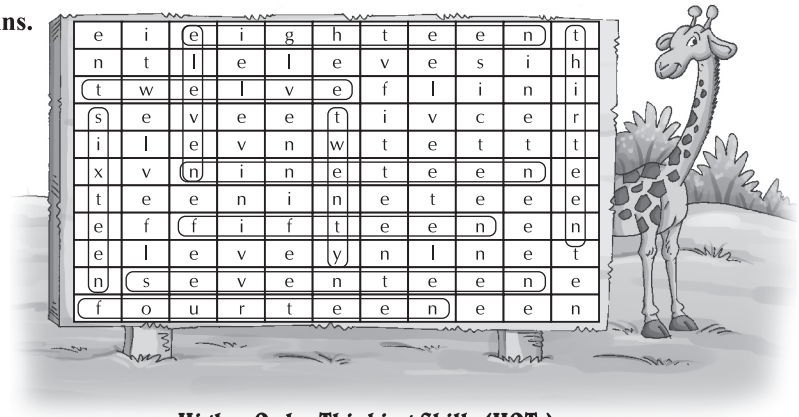
Critical Thinking

Ans.



2. Crossword puzzle. (Find the number names from 11 to 20)

Ans.



Higher Order Thinking Skills (HOTs)

Correct the spelling of the number names :

Ans.

tewnty	**twenty**	tvelwe	**twelve**
thirty-ivfe	**thirty-five**	tewnty-neves	**twenty-seven**
forty-owt	**forty-two**	tyffi	**fifty**
sitxeen	**sixteen**	oftry	**forty**

Write the correct number in the blank boxes :

Problem Solving and Decision Making

Ans.

2 tens	+	7 ones	=	27	31	=	3	tens and	1	one
2 tens	+	6 ones	=	26	48	=	4	tens and	8	ones
5 tens	+	0 ones	=	50	29	=	2	tens and	7	ones
3 tens	+	3 ones	=	33	39	=	3	tens and	9	ones

Write the numbers for the following :

Collaboration

Ans.

Fifty	50	Twenty-six	26
Twenty-seven	27	Thirty-nine	39
Forty-two	42	Forty-seven	47
Thirty-eight	38	Twenty-one	21
Thirty	30	Nineteen	19

Write the number before, after or in between the given numbers.

Ans.

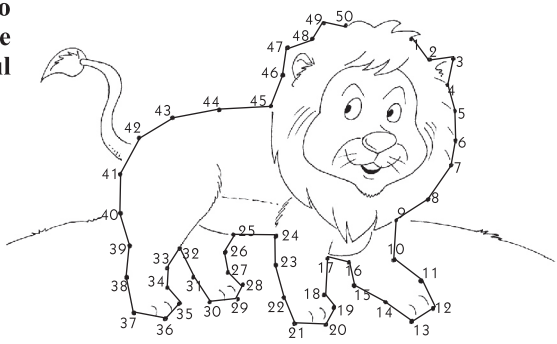
before		after		in between		
27	28	32	33	27	28	29
47	48	39	40	48	49	50

NEP

Creative Thinking

Join the dots from 1 to 50. Complete the picture and fill some beautiful colours.

Ans.



Chapter

9 Data Handling

Let's Recall

Animal Count. Knowledge of India

Ans.

 5  4  2  1

	Number of the animal	Number
• It is most in number	Rabbits	5
• It is least in number	Elephant	1

Collecting and Writing Data

Study the pictures given below carefully and answer the questions. All Round Development of Skills

Ans.

How many children are there in the picture?	**12 children**
Count the number of boys and girls?	**10 boys 2 girls**
How many children wear blue T-shirt?	3 **children wear blue T-shirt**
How many children wear red T-shirt?	4 **children wear red T-shirt**

Colour the box with correct answer. Practical Knowledge

Ans.

How many duck are there?	4	**8**	7
How many hens are there?	2	3	**4**
How many more sheep are there than hens?	**3**	4	5
How many animals are there in all?	20	21	**19**

NEP

Collaboration

It is summer vacation Roma and Ronak visiting the National Park. Look at this picture and answer the following questions.

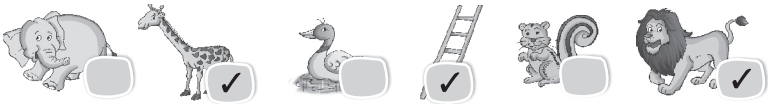
Ans. 1. There are 3 girls. 2. There are 4 boys.

3. 3 children are wearing hats

4. 2 children are wearing spectacles.

Higher order Thinking Skills (HOTS)

Tick (✓) the objects and animals that are taller than you.



Ans. How many objects and animals are smaller than you? **2**

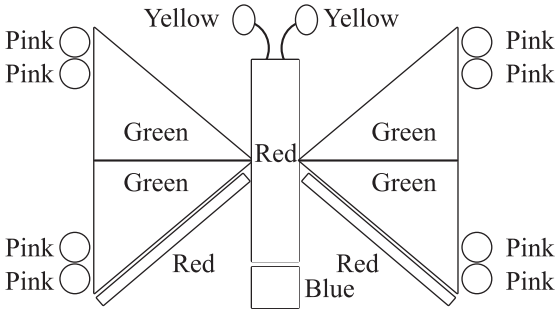
Chapter

10 Patterns

Let's Recall

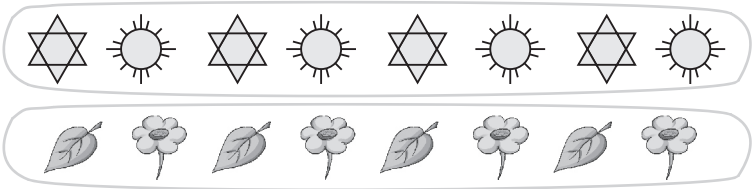
Colour the rectangle red, the square blue, the triangle green, the circle pink and the ovals yellow in the given figure. Art Integration

Ans.

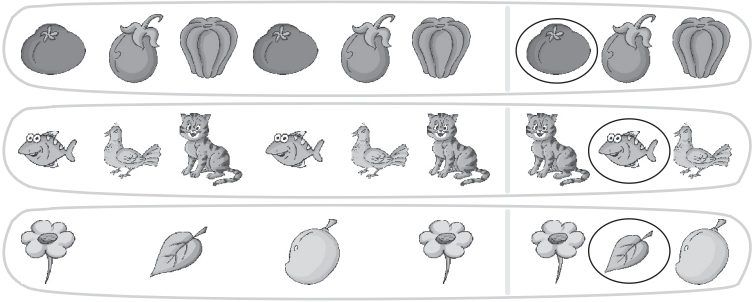


Patterns

Complete the patterns and colour them. Art Integration



Circle the object that comes next.

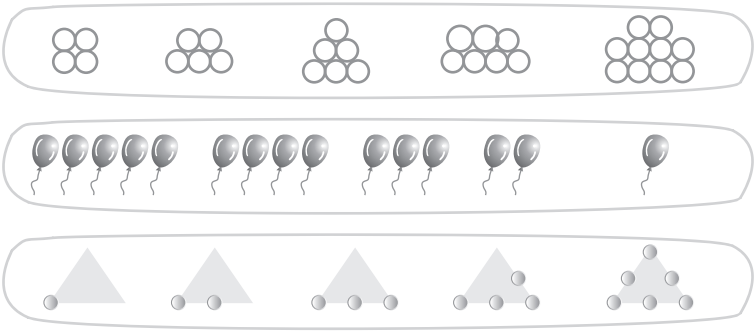


Number Patterns

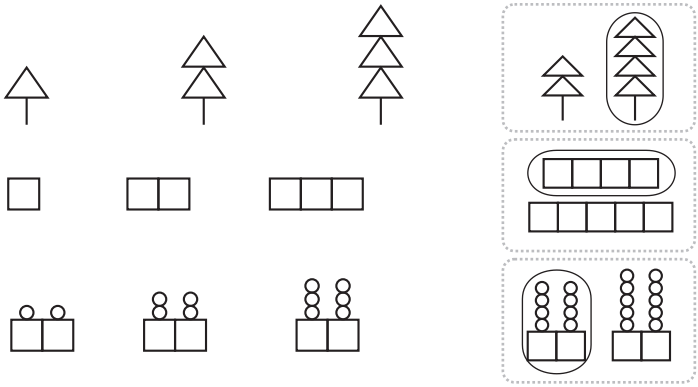
Observe and complete the pattern of numbers :

2	4	6	8	10	12
3	6	9	12	15	18
5	9	13	17	21	25
37	32	27	22	17	12

Draw the next one to complete the pattern.



Ring the object that continues to form the pattern. Also, colour them.



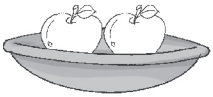
Chapter 11

Multiplication

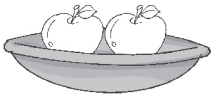
Let's Recall

Colour the fruits given in each basket. Also, count their total number.

Ans. 1.



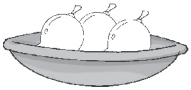
2 apples



2 apples

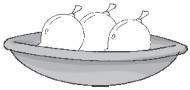
4 apples in all.

2.



3 mangoes

3 mangoes



3 mangoes

9 mangoes in all.

Introduction to Multiplication

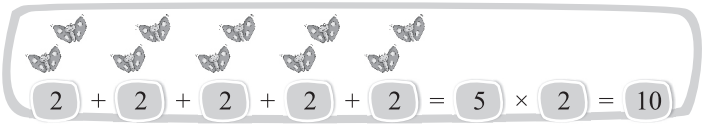
Ans. There are 4 sets of balloons. Each set has **3** balloons.

So, 3 + 3 + 3 + 3 = 12 balloons.

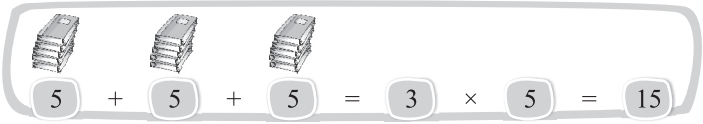
4 times 3 = 12

or 4 × 3 = 12

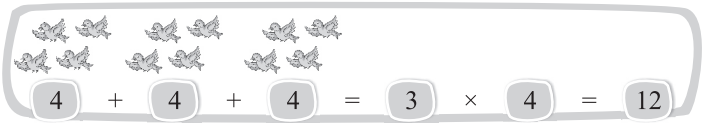
Fill in the boxes. Creative Thinking



2 + 2 + 2 + 2 + 2 = 5 × 2 = 10



5 + 5 + 5 = 3 × 5 = 15



4 + 4 + 4 = 3 × 4 = 12

Multiplication Tables

Fill in the boxes. Subject Enrichment

Ans.

₹ 4 ₹ 4

Buy 1 kite for ₹4

Buy 2 kites for ₹4+₹4=₹8

2 fours = 8

2 times 4 = 8

2 × 4 = 8

Answer ☺ : ₹ 8

₹ 5 ₹ 5

Buy 1 mango for ₹5

Buy 2 mangoes for ₹5+₹5=₹10

2 fives = 10

2 times 5 = 10

2 × 5 = 10

Answer ☺ : ₹ 10

Write the product of the following : Experiential Learning

Ans.

2 × 5 = **10**	6 × 2 = **12**	4 × 4 = **16**
9 × 10 = **90**	7 × 4 = **28**	10 × 5 = **50**
8 × 2 = **16**	5 × 5 = **25**	3 × 7 = **21**
7 × 5 = **35**	6 × 3 = **18**	10 × 4 = **40**

Vertical Multiplication

Multiply : Integrated Approach

Ans.

T	O	T	O	T	O	T	O	T	O	T	O	T	O
	5		3		5		7		9		4		8
×	1	×	1	×	5	×	4	×	2	×	3	×	5
	5		3	2	5	2	8	1	8	1	2	4	0

T	O	T	O	T	O	T	O	T	O	T	O	T	O
	3		6		5		4		6		7		6
×	5	×	2	×	8	×	4	×	3	×	5	×	1
1	5	1	2	4	0	1	6	1	8	3	5		6

T	O	T	O	T	O	T	O	T	O	T	O
	9		9		4		2		2		7
×	3	×	1	×	2	×	2	×	3	×	2
2	7		9		8		4		6	1	4

NEP

Communication

Show each repeated addition as multiplication by filling in the blanks. Then answer the riddle by writing the letter besides each question on the correct answer.

Ans.

3 + 3 + 3 + 3 = **4** × 3 ⇒ I

1 + 1 + 1 + 1 + 1 + 1 = **6** × 1 ⇒ R

8 + 8 + 8 + 8 = 4 × **8** ⇒ E

$10 + 10 =$ **2** $\times$ 10 $\Rightarrow$ C

$7 + 7 + 7 + 7 + 7 + 7 + 7 =$ 7 $\times$ **7** $\Rightarrow$ M

$9 + 9 + 9 =$ **3** $\times$ 9 $\Rightarrow$ A

$2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 =$ **10** $\times$ 2 $\Rightarrow$ E

$6 + 6 + 6 + 6 + 6 =$ 5 $\times$ 6 $\Rightarrow$ C

Riddle

I	C	E		C	R	E	A	M
4	5	8		2	6	10	3	7

What we love to eat in summer season?

MCQs

Choose the correct option : Creative Thinking

Ans. 1. a 2. b 3. a 4. a

Chapter

12 Division

Division as Repeated Subtraction

Divide by repeated subtraction :

Ans.

20 ÷ 5		**4 ÷ 2**		**6 ÷ 2**	
20 – 5 = 15	1	4 – 2 = 2	1	6 – 2 = 4	1
15 – 5 = 10	2	2 – 2 = 0	2	4 – 2 = 2	2
10 – 5 = 5	3			2 – 2 = 0	3
5 – 5 = 0	4				
∴ **20 ÷ 5 = 4**		∴ **4 ÷ 2 = 2**		∴ **6 ÷ 2 = 3**	

10 ÷ 5

10 – 5 = 5 (1)

5 – 5 = 0 (2)

∴ **10 ÷ 5 = 2**

12 ÷ 3

12 – 3 = 9 (1)

9 – 3 = 6 (2)

6 – 3 = 3 (3)

3 – 3 = 0 (4)

∴ **12 ÷ 3 = 4**

18 ÷ 6

18 – 6 = 12 (1)

12 – 6 = 6 (2)

6 – 6 = 0 (3)

∴ **18 ÷ 6 = 3**

Division as Making Equal Sets

Ans. Divide 12 pencils into 4 boys.

12 ÷ 4

= 3

So, each boy gets **3** pencils.

Divide 18 apples into 6 baskets.

18 ÷ 6

= 3

So, there are **3** apples in each basket.

Divide 30 books into 6 bags.

30 ÷ 6

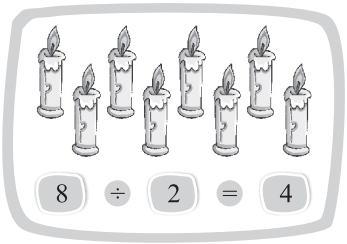
= 5

So, there are **5** books in each bag.

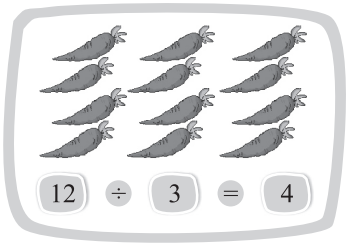
NEP

Make group to divide and fill in the boxes : Experiential Learning

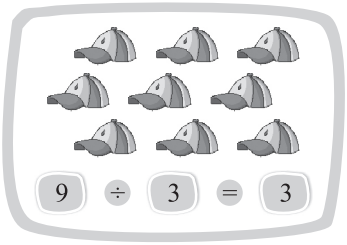
Ans.

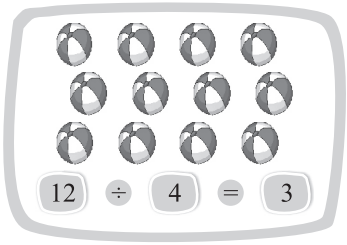


8 ÷ 2 = 4



12 ÷ 3 = 4





Higher Order Thinking Skills (HOTS)

Ans. Three are **5** fish in each aquarium.

Chapter

13 Numbers (Addition and Subtraction up)

Collaboration

Let's Recall

Read the sums carefully and add or subtract :

Ans. 1. There are 5 cows and 3 buffalloes in the farm. How many cattles in all?

Answer ☺ : There are **8** cattles in all.

2. There are 4 hens and 3 ducks. How many more hens than ducks are there?

Answer ☺ : There are **1** more hens than ducks.

3. 2 birds sit on a tree and 2 are flying. How many birds in all?

Answer ☺ : There are **4** birds in all.

$$\begin{array}{r} 5 \\ +\ 3 \\ \hline 8 \end{array} \qquad \begin{array}{r} 4 \\ -\ 3 \\ \hline 1 \end{array} \qquad \begin{array}{r} 2 \\ +\ 2 \\ \hline 4 \end{array}$$

Count Forward to Add

Writing Skills

Add using the number strip.

Ans.

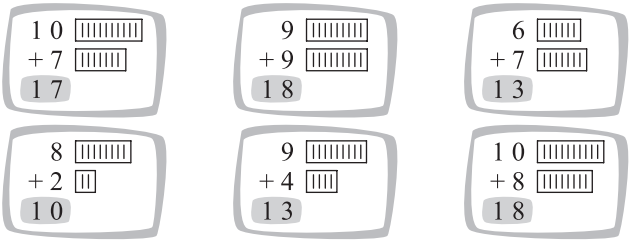
$$\begin{array}{r} 7 \\ +\ 8 \\ \hline 15 \end{array} \quad \begin{array}{r} 2 \\ +\ 9 \\ \hline 11 \end{array} \quad \begin{array}{r} 6 \\ +\ 3 \\ \hline 9 \end{array} \quad \begin{array}{r} 3 \\ +\ 8 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 4 \\ +\ 8 \\ \hline 12 \end{array} \quad \begin{array}{r} 7 \\ +\ 9 \\ \hline 16 \end{array} \quad \begin{array}{r} 8 \\ +\ 5 \\ \hline 13 \end{array} \quad \begin{array}{r} 6 \\ +\ 8 \\ \hline 14 \end{array}$$

Addition by drawing lines

Add and write the answer in the box. Art Integration

Ans.



Higher Order Thinking Skills (HOTS)

Sahil read 19 pages in all on these days.

Count Back to Subtract

Subtract using the number strip.

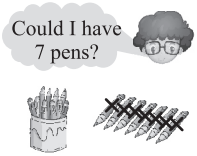
Ans.

17 − 3 = 14	16 − 5 = 11	18 − 4 = 14	11 − 1 = 10
18 − 5 = 13	19 − 6 = 13	12 − 0 = 12	13 − 2 = 11

Subtraction by Cutting objects

Cross (✗) out and solve. Experimental Learning

Ans.



$$\begin{array}{r} 17 \\ -\ 7 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 19 \\ -\ 7 \\ \hline 12 \end{array}$$

More Practice on Subtraction

Problem Solving and Decision Making

Draw as many counters as the bigger number. Now subtract by crossing out them. One has been done for you.

Ans.

$$\begin{array}{r} 15 \\ -\ 8 \\ \hline 7 \end{array} \quad \begin{array}{r} 17 \\ -\ 6 \\ \hline 11 \end{array} \quad \begin{array}{r} 12 \\ -\ 7 \\ \hline 5 \end{array} \quad \begin{array}{r} 11 \\ -\ 4 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 19 \\ -\ 5 \\ \hline 14 \end{array} \quad \begin{array}{r} 14 \\ -\ 8 \\ \hline 6 \end{array} \quad \begin{array}{r} 16 \\ -\ 3 \\ \hline 13 \end{array} \quad \begin{array}{r} 18 \\ -\ 7 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 14 \\ -\ 4 \\ \hline 10 \end{array} \quad \begin{array}{r} 15 \\ -\ 3 \\ \hline 12 \end{array} \quad \begin{array}{r} 11 \\ -\ 10 \\ \hline 1 \end{array} \quad \begin{array}{r} 14 \\ -\ 9 \\ \hline 5 \end{array}$$

Word Problems

Practical Knowledge

Solve the following word problems.

Ans.

1. Jeetu has stamps = 11
Meetu has stamps = 9
Answer : ☺ Now they have 20 stamps altogether.

$$\begin{array}{r} 11 \\ +\ 9 \\ \hline 20 \end{array}$$

2. Mohini had rupees = 15
Her father gare her rupees = 5
Answer ☺ **:** Mohini has 20 rupees now.

$$\begin{array}{r} 15 \\ +\ 5 \\ \hline 20 \end{array}$$

3. Number of bananas = 12
Number of apples = 6
Answer ☺ **:** There are 18 fruits in the basket.

$$\begin{array}{r} 12 \\ +\ 6 \\ \hline 18 \end{array}$$

4. Number of old chairs = 7
Number of New chairs = 8
Answer ☺ **:** There are 15 chairs in the room now.

$$\begin{array}{r} 7 \\ +\ 8 \\ \hline 1\ 5 \end{array}$$

5. Ankita bought eggs = 16
Number of eggs broken = 6
Answer ☺ **:** There are 10 eggs left with Ankita.

$$\begin{array}{r} 1\ 6 \\ -\ 6 \\ \hline 1\ 0 \end{array}$$

6. Kush has story books = 18
He gave story books to friend = 6
Answer ☺ **:** 12 story books are left with Kush.

$$\begin{array}{r} 1\ 8 \\ -\ 6 \\ \hline 1\ 2 \end{array}$$

7. Niharika had flowers = 19
She gave flowers to soseph = 8
Answer ☺ **:** 11 flowers were left with her.

$$\begin{array}{r} 1\ 9 \\ -\ 8 \\ \hline 1\ 1 \end{array}$$

8. Roshni ate toffees = 7
Jyoti ate toffees = 12
Answer ☺ **:** They ate 19 toffees in all.

$$\begin{array}{r} 1\ 2 \\ +\ 7 \\ \hline 1\ 9 \end{array}$$

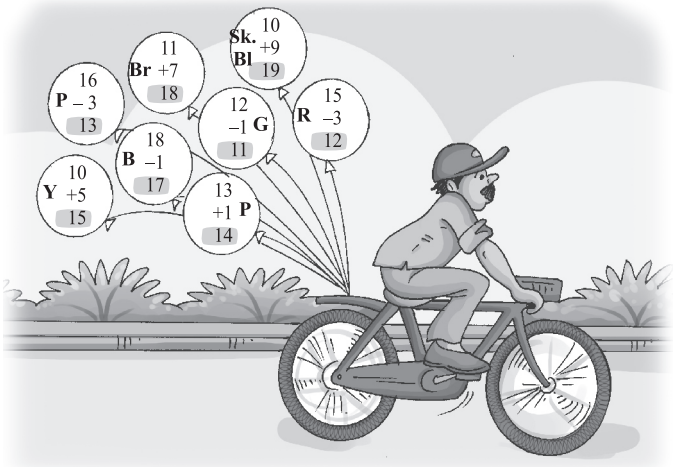
MCQs

Choose the correct option. Creative Thinking

Ans. 1. b 2. b 3. c 4. a

Add or subtract the numbers and colour the balloons. Art Integration

Ans.



Higher Order Thinking Skills (HOTS)

Ans. 16 bananas are left with Joya.

Chapter

14 Money

Let's Recall

This is a toy shop. Look at the price tag of each toy and answer the following questions.

Ans. a. Which toy costs most? **Bat**

b. Which toy costs least? **Car**

Counting Money

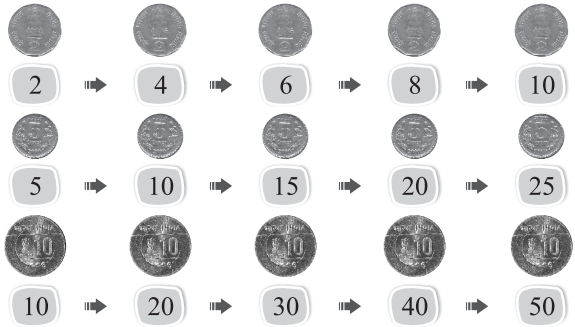
Calculate the value for the following : Knowledge of India

Ans.

₹19

To count the money of the same value, we can use skip counting. Practical Knowledge

Ans.



Write the amount of money with each child.

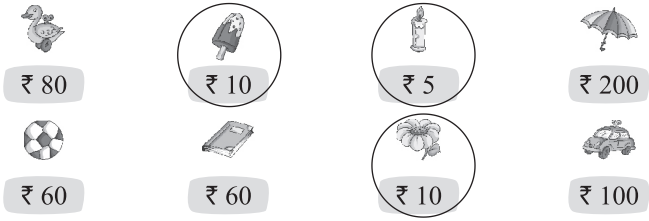
Ans.

Higher Order Thinking Skills (HOTS)

Ans.

Circle the maximum number of articles you can buy in 50 rupees. Analytical Skills

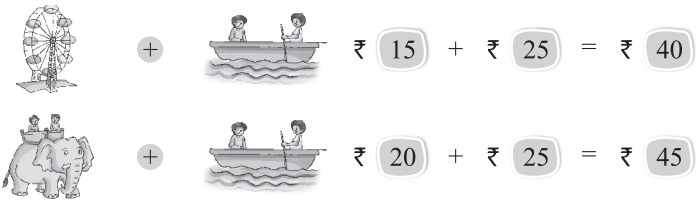
Ans.



NEP Life Skill and Values

Look at the given example and write how much Ansh's father will have to pay if they go on the following rides.

Ans.



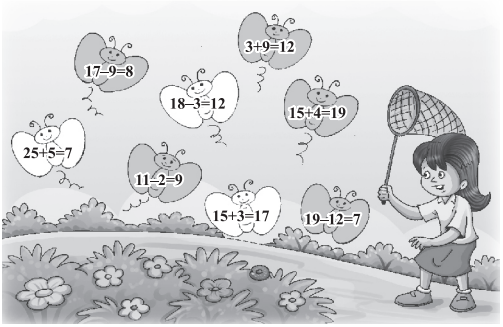
Chapter

15 Addition and Subtraction up to 100

Let's Recall

Maya wants to catch only those butterflies which have correct answers on them. Colour the butterflies that Maya caught.

Ans.



Addition without Regrouping

Add the following : Practical Knowledge

Ans.

T	O
3	2
+	3
3	5

T	O
5	8
+	1
5	9

T	O
7	3
+	5
7	8

T	O
5	7
+	1
5	8

T	O
1	7
+	2
1	9

T	O
2	8
+	1
2	9

T	O
6	1
+	4
6	5

T	O
3	5
+	2
3	7

T	O
4	1
+	2
4	3

T	O
7	8
+	1
7	9

Adding Tens

Add the tens. Practical Knowledge

Ans.

1 tens + 4 tens = 5 tens

2 tens + 6 tens = 8 tens

7 tens + 1 tens = 8 tens

5 tens + 4 tens = 9 tens

5 tens + 5 tens = 10 tens

10 + 40 = 50

20 + 60 = 80

70 + 10 = 80

50 + 40 = 90

50 + 50 = 100

Solve : Collaboration

Ans.

T	O
4	0
+ 2	0
6	0

T	O
4	0
+ 5	0
9	0

T	O
7	0
+ 1	0
8	0

T	O
4	0
+ 3	0
7	0

Add the following : Practical Knowledge

Ans.

T	O
1	4
+ 6	3
7	7

T	O
2	4
+ 2	4
4	8

T	O
3	5
+ 4	4
7	9

T	O
3	3
+ 5	5
8	8

T	O
3	5
+ 4	1
7	6

T	O
5	3
+ 2	6
7	9

T	O
1	8
+ 3	1
4	9

T	O
2	9
+ 6	0
8	9

T	O
5	1
+ 2	4
7	5

T	O
3	4
+ 2	4
5	8

Addition with Regrouping

Now regroup the following numbers. One is one for you. Analytical Skills

Ans.

T	O
4	14
5 tens	4 ones

T	O
5	18
6 tens	8 ones

T	O
2	16
3 tens	6 ones

T	O
3	19
4 tens	9 ones

Add the following : Practical Knowledge

Ans.

T	O
1	
6	4
+ 1	8
8	2

T	O
1	
3	1
+ 5	9
9	0

T	O
1	
5	4
+ 3	9
9	3

T	O
1	
4	9
+ 4	1
9	0

T	O
1	
3	6
+ 3	8
7	4

T	O
1	
5	3
+ 2	9
8	2

T	O
1	
2	2
+ 4	9
7	1

T	O
1	
4	9
+ 3	8
8	7

T	O
1	
5	6
+ 1	5
7	1

T	O
1	
1	7
+ 1	4
3	1

Subtraction without Regrouping

Subtract the following : Life Skill and Values

Ans.

T	O
5	4
–	3
5	1

T	O
3	9
–	7
3	2

T	O
6	8
–	4
6	4

T	O
5	6
–	3
5	3

T	O
4	7
–	1
4	6

T	O
8	7
–	5
8	2

T	O
2	7
–	3
2	4

T	O
7	1
–	1
7	0

T	O
8	8
–	5
8	3

T	O
9	4
–	2
9	2

T	O
3	4
–	4
3	0

T	O
7	5
–	4
7	1

T	O
9	2
–	2
9	0

T	O
5	3
–	3
5	0

T	O
1	6
–	5
1	1

Subtracting Tens

Subtract the tens. Critical Thinking

Ans.

7 tens – 3 tens = 4 tens

6 tens – 5 tens = 1 tens

8 tens – 6 tens = 2 tens

9 tens – 9 tens = 0 tens

70 – 30 = 40

60 – 50 = 10

80 – 60 = 20

90 – 90 = 0

Subtract the following. Life Skill and Values

Ans.

T	O
3	0
– 2	0
1	0

T	O
5	0
– 1	0
4	0

T	O
4	0
– 3	0
1	0

T	O
9	0
– 4	0
5	0

T	O
5	0
– 4	0
1	0

T	O
8	0
– 2	0
6	0

T	O
6	0
– 3	0
3	0

T	O
7	0
– 3	0
4	0

Subtraction of 2-digit Numbers

Subtract the following :

Ans.

T	O
3	7
– 2	2
1	5

T	O
7	8
– 6	1
1	7

T	O
2	7
– 1	4
1	3

T	O
7	4
– 3	3
4	1

T	O
3	3
– 1	1
2	2

T	O
2	7
– 1	2
1	5

T	O
7	8
– 4	3
3	5

T	O
2	9
– 1	4
1	5

T	O
7	7
– 3	2
4	5

T	O
9	6
– 2	4
7	2

T	O
2	7
– 2	4
0	3

T	O
4	8
– 1	0
3	8

T	O
1	8
– 1	5
0	3

T	O
5	7
– 1	5
4	2

T	O
7	5
– 3	2
4	3

Subtraction with Regrouping

Regroup the following numbers by borrowing one ten from tens. One is done for you.

Experiential Learning

Ans.

82 = 8 tens + 2 ones = 7 tens + 12 ones

66 = 6 tens + 6 ones = 5 tens + 16 ones

52 = 5 tens + 2 ones = 4 tens + 12 ones

43 = 4 tens + 3 ones = 3 tens + 13 ones

Subtract the numbers : Analytical Skills

Ans.

T	O
3	13
~~4~~	~~3~~
–	7
3	6

T	O
7	12
~~8~~	~~2~~
– 3	6
4	6

T	O
4	12
~~5~~	~~2~~
– 1	6
3	6

T	O
4	14
~~5~~	~~4~~
– 4	8
0	6

T	O
8	10
~~9~~	~~0~~
– 7	3
1	7

T	O
6	13
~~7~~	~~3~~
– 5	4
1	9

T	O
9	~~5~~
–	5
9	0

T	O
2	18
~~3~~	~~8~~
– 1	9
1	9

T	O
8	10
~~9~~	~~0~~
– 4	5
4	5

T	O
3	14
~~4~~	~~4~~
– 2	5
1	9

Word Problems

Solve the following word problems. Practical Knowledge

Ans.

1. Kabir drew 35 pictures. His friend drew 29 pictures. How many pictures did they draw in all?

Answer ☺ **:** They drew 64 picture in all.

T	O
1	
3	5
+ 2	9
6	4

2. In a farm there are 38 hens and 53 sheep. How many hens and sheep are there in the farm?

Answer ☺ **:** There are 91 hens and sheep in the farm.

T	O
1	
3	8
+ 5	3
9	1

3. A book contains 84 pages. Swarnim reads 57 pages. How many pages has she to read?

Answer ☺ **:** She has left 27 pages to read.

T	O
7	14
8	4
– 5	7
2	7

4. There were 56 passengers in a bus. 32 got down at a bus stop. How many passengers were left in the bus?

Answer ☺ **:** 24 passengers were left in the bus.

	T	O
	5	6
−	3	2
	2	4

5. 86 students went on a picnic. Of them, 33 were boys. How many girls went on the picnic?

Answer ☺ **:** 53 girls went on a picnic.

	T	O
	8	6
−	3	3
	5	3

Higher Order Thinking Skills (HOTS)

Add or subtract the following with the help of the 'key' given above. One has been done for you.

Ans. a. 

23 + 31 = 54

b. 

32 + 12 = 44

c. 

42 + 18 = 60

Today is Jiya's birthday. Read the story and find the answer.

Ans. 1.

$$\begin{array}{r} 28 \\ -\ 16 \\ \hline 12 \end{array}$$

12 more friends will come.

2.

$$\begin{array}{r} 1 \\ 12 \\ 8 \\ +\ 16 \\ \hline 36 \end{array}$$

Mummy make 36 eatables in all.

3.

$$\begin{array}{r} 40 \\ -\ 8 \\ \hline 32 \end{array}$$

Papa is 32 years older than Jiya.

4.

$$\begin{array}{r} 50 \\ +\ 25 \\ \hline 75 \end{array}$$

Jiya got its rupees in all.

MCQs

Ans. 1. a 2. b 3. c 4. a

Chapter 1

Numbers up to 1000

Let's Recall

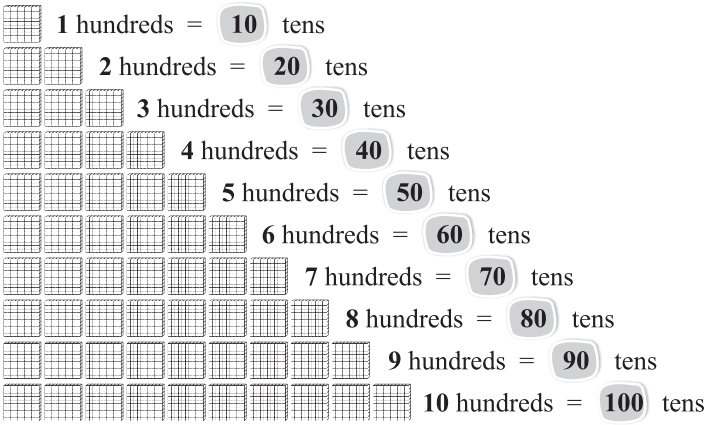
Oops! Siya has mixed up the number blocks. Can you help her to write them in order from smallest to the greatest?

Ans. 8, 11, 16, 22, 39, 56, 65, 78, 82, 95

Counting in Hundreds

Fill in the blanks and boxes. Writing Skills

Ans.



1 hundreds = **10** tens

2 hundreds = **20** tens

3 hundreds = **30** tens

4 hundreds = **40** tens

5 hundreds = **50** tens

6 hundreds = **60** tens

7 hundreds = **70** tens

8 hundreds = **80** tens

9 hundreds = **90** tens

10 hundreds = **100** tens

Reading 3-digit Numbers

Ans. Similarly, we read
701 "Seven hundred one"
998 "Nine hundred ninety-eight"

Fun with Maths

Fill in the boxes.

Ans. 1. 369 = 3 hundreds = 6 tens + 9 ones — Three hundred sixty-nine

2. 678 = 6 hundreds = 7 tens + 8 ones — Six hundred seventy-eight

Exercise 1.1

1. Write the number for the following : All Round Development of Skills

Ans. a. 341 b. 430 c. 895 d. 728 e. 576 f. 225

2. Write the number names of the following : Collaboration

Ans.
a. Three hundred forty-two
b. Seven hundred eight
c. Six hundred seventy-five
d. Three hundred forty-one
e. Four hundred ninety-nine
f. Nine hundred twenty

3. Write the numbers from 301-400. Analytical Skills

Ans.

301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400

Exercise 1.2

1. Write the missing number. Creative Thinking

Ans.
a. 16 17 18 b. 148 149 150 c. 342 343 344
d. 799 800 801 e. 657 658 659 f. 988 989 990

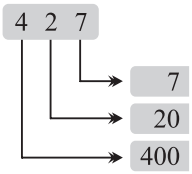
2. Fill in the blanks boxes. Subject Enrichment

Ans.

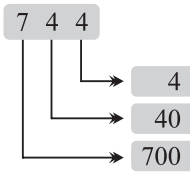
Before		In Between			After	
374	375	215	216	217	99	100
170	171	529	530	531	278	279
927	928	799	800	801	399	400
989	990	126	127	128	572	573
240	241	409	410	411	999	1000

3. Write the place value of each digit. Problem Solving and Decision Making

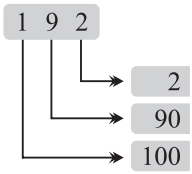
Ans. a.



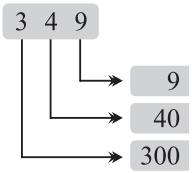
b.



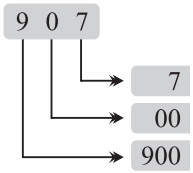
c.



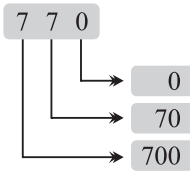
d.



e.

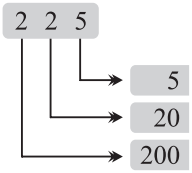


f.



4. Write the number. Experiential Learning

Ans. a.



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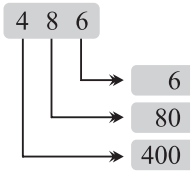
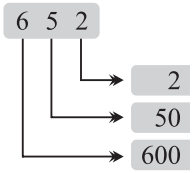


c.



5. Write the place value of coloured digit. Subject Enrichment

Ans. a. The place value of 7 in 471 is 70.
b. The place value of 3 in 395 is 300.
c. The place value of 0 in 109 is 00.
d. The place value of 3 in 423 is 3.
e. The place value of 5 in 975 is 5.
f. The place value of 3 in 395 is 300.
g. The place value of 1 in 316 is 10.
h. The place value of 7 in 175 is 70.

6. Write in expanded form. Functional Skills

Ans. a. 247 = 200 + 40 + 7 b. 864 = 800 + 60 + 4

c. 792 = 700 + 90 + 2 d. 618 = 600 + 10 + 8

7. Write the short form. Writing Skills

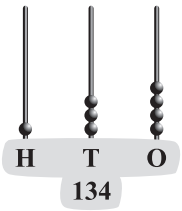
Ans. a. 900 + 80 + 9 = **989** b. 400 + 10 + 9 = **419**

c. 200 + 20 + 2 = **222** d. 600 + 50 + 4 = **654**

Exercise 1.3

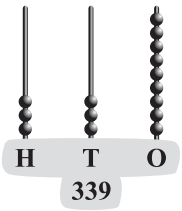
1. Look at the abacus and write the number. All Round Development of Skills

Ans. a.



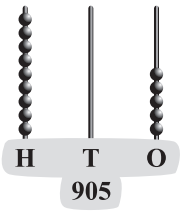
134

b.



339

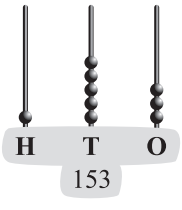
c.



905

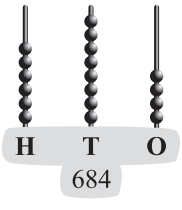
2. Draw beads on the abacus to represent the numbers. Life Skill and Values

Ans. a.



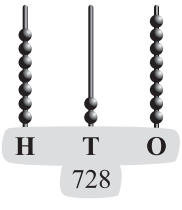
153

b.



684

c.



728

Higher Order Thinking Skills (HOTS)

Ans. Shop A **₹ 345** shop B **₹350**

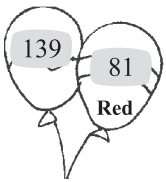
345 < 350

I should buy the doll from **shop A**

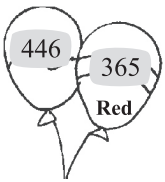
Exercise 1.4

1. Colour red the balloon with smaller number. Art Integration

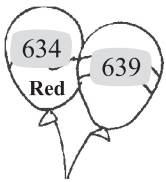
Ans. a.



b.



c.



2. Colour green the kite with greater number. Art Integration

Ans. a. 190 G 92 b. 419 G 409 c. 518 G 512

3. Tick (✓) the smallest number and cross (✗) the greatest number : Collaboration

Ans. a. 134 ○ 100 ✓ 150 ✗ b. 169 ✗ 117 ✓ 124 ○

c. 520 ✓ 527 ○ 540 ✗ d. 911 ✗ 812 ✓ 910 ○

e. 656 ○ 156 ✓ 740 ✗ f. 132 ✓ 623 ○ 632 ✗

4. Write the numbers in increasing order. Experimental Learning

Ans. a. 172, 180, 476, 571 b. 96, 169, 196, 418

c. 31, 128, 600, 741 d. 145, 375, 465, 565

5. Write the numbers in decreasing order. Experiential Learning

Ans. a. 803, 418, 174, 144 b. 879, 788, 717, 197

c. 654, 364, 200, 135 d. 989, 909, 819, 200

Ordinal Numbers

In the animal race who got 1st, 2nd, 3rd and 4th position?

Ans. Rabbit 2nd Elephant 3rd Turtle 4th Tiger 1st

Exercise 1.5

1. Colour in red the second joker, in blue the third joker and in yellow the fifth joker. Art Integration

Ans.

2. Fill in the blanks : Critical Thinking

Ans. a. The position of R in SISTER is **Sixth** .

b. The position of K in BLACKBOARD is **Fifth** .

c. The position of **H** in SCHOOL is 3rd.

d. Position of **Y** in SUNDAY is 6th.

Fun With Maths

Name six parts of our body that are in pairs.

Ans. eyes, lungs, kidneys, hands, legs, ears

Higher Order Thinking Skills (HOTS)

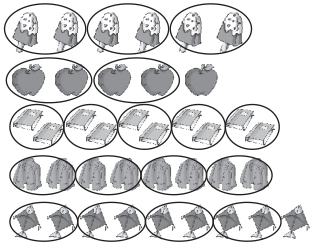
Write the smallest even and odd numbers.

Ans. even 2 odd 1

Exercise 1.6

1. Write even or odd by pairing. Subject Enrichment

Ans.



a. even

b. odd

c. even

d. even

e. odd

2. Circle the even numbers and tick (✓) the odd numbers in the following.

Ans.

35✓	(46)	(54)	17✓	1✓	33✓	(98)	67✓	(44)	(72)
(2)	99✓	49✓	(28)	7✓	(48)	59✓	71✓	19✓	81✓
(36)	(70)	89✓	27✓	(62)	(78)	(38)	13✓	53✓	(68)
21✓	(8)	69✓	39✓	73✓	51✓	(14)	91✓	79✓	(30)

Multiples Choices Questions (MCQS)

Choose the correct option : Creative Thinking

Ans. 1. b 2. c 3. a 4. a

NEP

Place the correct sign >, < or =. Integrated Approach

Ans. a. BAT < MAT b. POT < HOT c. DON > WON
d. TEN > BEN e. RUN < SUN f. MIX < SIX
g. WAR = CAR h. DOG > CAT i. KIM < RIM
j. FAT > MAT

Chapter 2

Fractions

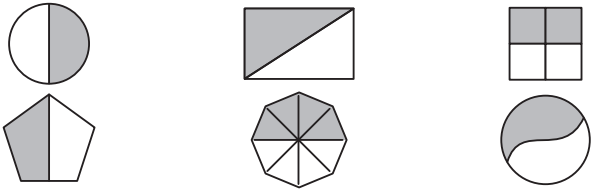
Exercise 2.1

1. Tick (✓) the shapes which are cut into halves. Analytical Skills

Ans.

2. Colour the part(s) to show $\frac{1}{2}$. Coordinated Exercise Work

Ans.

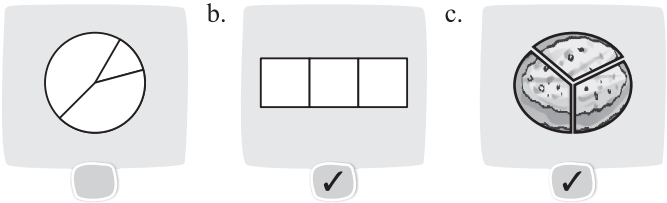


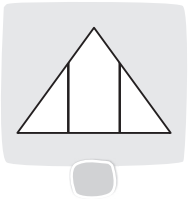
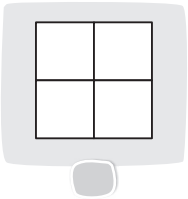
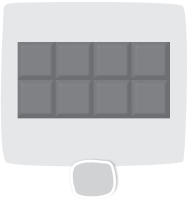
Exercise 2.2

All Round Development of Skills

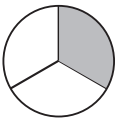
1. Tick (✓) the shapes which are divided into 3 equal parts.

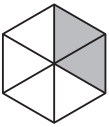
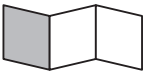
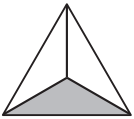
Ans. a. b. c.



d.  e.  f. 

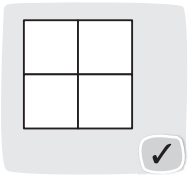
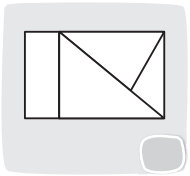
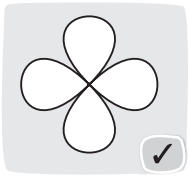
2. Colour the parts(s) that show one-third. Art Integration

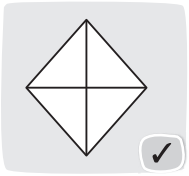
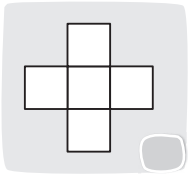
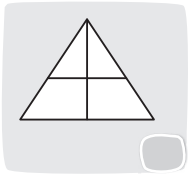
Ans. a.  b.  c. 

d.  e.  f. 

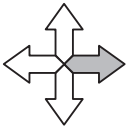
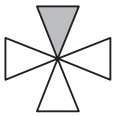
Exercise 2.3

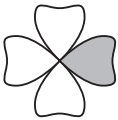
1. Tick (✓) the pictures which are divided into quarters. Communication

Ans. a.  b.  c. 

d.  e.  f. 

2. Colour the parts(s) to show $\frac{1}{4}$. Functional Skills

Ans. a.  b.  c. 

d. 

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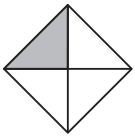
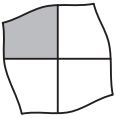
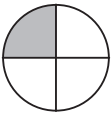
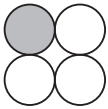
f. 

g. 

h. 

i. 

Higher Order Thinking Skills (HOTS)

Answer the following questions. One has been done for you.

Ans. 1. How many  are in  ? **2**

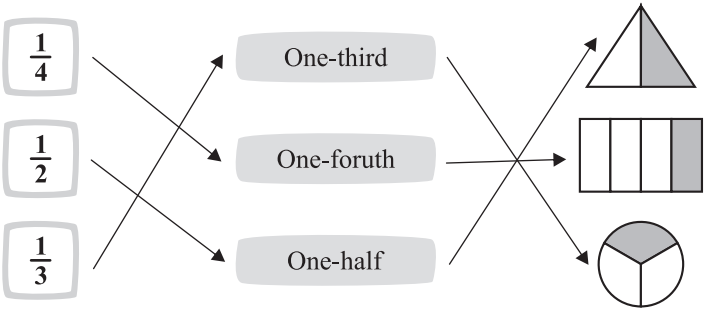
2. How many  are in  ? **8**

3. How many  are in  ? **4**

NEP

Match the following : Art Integration

Ans.



Multiple Choice Questions (MCQs)

Choose the correct option. Creative Thinking

Ans. 1. c 2. c 3. a

Chapter

3 Addition

Let's Recall

Add and find the answer.

Ans. a. Joy collected 12 eggs while her sister mary collected 25 eggs.

Thus, they collected **37** eggs in all.

	1	2
+	2	5
	3	7

b. Papa milk the cows. First cow gives 12 L milk, second cow gives 15 L milk and the third cow gives 8 L milk.

Thus, three cows give **35** L milk altogether.

	1	2
	1	5
+		8
	3	5

c. Mummy collects 35 carrots and 18 brinjals.

Thus, she collects **53** vegetables in all.

	3	5
+	1	8
	5	3

Exercise 3.1

1. Complete the following on the basis of addition facts. Functional Skills

Ans. a. 54 + 0 = 54 b. 65 + 0 = 65 c. 78 + 0 = 78

d. 44 + 1 = 45 e. 92 + 1 = 93 f. 39 + 1 = 40

2. Add the following. Writing Skills

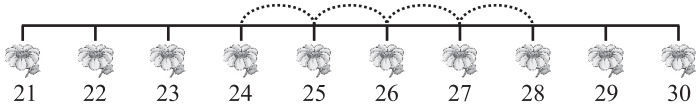
Ans. a. 9 + 4 = 9 + 4 b. 18 + 15 = 18 + 15

c. 49 + 2 = 2 + 49

Exercise 3.2

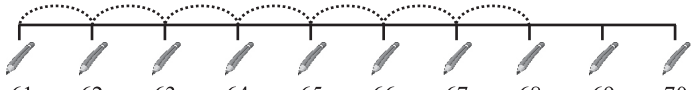
1. Add on the number line and write the answer: Experiential Learning

Ans. a. 24 + 4 = 28

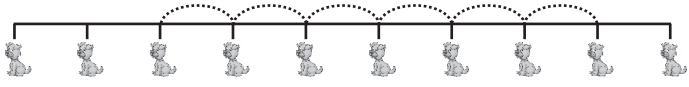


b. 32 + 5 = 37

c. 61 + 7 = 68



d. 83 + 6 = 89



Higher Order Thinking Skills (HOTS)

Regroup as tens and ones.

Ans. a. 41 ones = **4 tens + 1 one** b. 59 ones = **5 tens + 9 ones**
c. 85 ones = **8 tens + 5 ones** d. 74 ones = **7 tens + 4 ones**
e. 26 ones = **2 tens + 6 ones** f. 96 ones = **9 tens + 6 ones**

Exercise 3.3

1. Find the sum : Life Skill and Values

Ans. a.

	T	O
	1	
	1	8
+	2	7
	4	5

b.

	T	O
	1	
	6	7
+	2	9
	9	6

c.

	T	O
	1	
	5	8
+	2	9
	8	7

d.

	T	O
	1	
	1	6
+	2	8
	4	4

e.

	T	O
	1	
	6	1
+	2	9
	9	0

2. Arrange in column and add. Practical Knowledge

Ans. a.

	T	O
	4	6
+		9
	5	5

b.

	H	T	O
		6	4
+	3	6	
1	0	0	

c.

	T	O
	5	2
+	1	9
	7	1

d.

	T	O
	6	5
+	2	9
	9	4

e.

	T	O
	3	8
+	5	7
	9	5

f.

	T	O
	6	6
+	2	5
	9	1

g.

	T	O
	7	2
+	1	8
	9	0

h.

	T	O
	6	6
+	1	9
	8	5

Exercise 3.4

1. Add the following :

Life Skill and Values

Ans. a.

	T	O
	1	
	4	3
	3	5
+	1	6
	9	4

b.

	T	O
	2	
	1	8
	2	4
+	2	9
	7	1

c.

	T	O
	1	
	2	5
	2	5
+	2	5
	7	5

d.

	T	O
	2	
	4	5
	1	6
+	1	9
	8	0

e.

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

f.

	T	O
	2	
	1	8
	3	4
+	1	9
	7	1

g.

	T	O
	1	
	2	3
	3	5
+	2	2
	8	0

h.

	T	O
	2	
	3	5
	3	6
+	1	9
	9	0

Exercise 3.5

1. Find the sum :

Problem Solving and Decision Making

Ans. a.

	H	T	O
	1	7	3
+	2	1	4
	3	8	7

b.

	H	T	O
	6	3	0
+	2	1	2
	8	4	2

c.

	H	T	O
	3	7	0
+	4	2	6
	7	9	6

d.

	H	T	O
	3	4	1
+	4	1	3
	7	5	4

e.

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

f.

	H	T	O
	1	3	0
+	6	5	8
	7	8	8

g.

	H	T	O
	1	2	4
+	6	5	0
	7	7	4

h.

	H	T	O
	4	4	1
+	2	1	4
	6	5	5

i.

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

j.

	H	T	O
	1	0	5
+	5	0	1
	6	0	6

2. Arrange the columns and add. Practical Knowledge

Ans. a.

H	T	O
3	2	5
+ 1	3	4
4	5	9

b.

H	T	O
6	2	8
1	1	1
+ 1	0	0
8	3	9

c.

H	T	O
3	3	3
1	1	1
+ 2	2	2
6	6	6

d.

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

e.

H	T	O
5	4	4
1	1	0
+ 2	3	4
8	8	8

f.

H	T	O
2	3	1
1	1	1
+ 2	1	1
5	5	3

Exercise 3.6

1. Add the following : Practical Knowledge

Ans. a.

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

b.

H	T	O
1	1	
1	5	3
+ 1	7	7
3	3	0

c.

H	T	O
	1	
7	0	2
+ 1	6	9
8	7	1

d.

H	T	O
	1	
2	2	3
+ 2	3	7
4	6	0

2. Find the sum.

Ans. a.

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

b.

H	T	O
1	1	
3	2	5
3	8	2
+	4	8
7	5	5

c.

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

d.

H	T	O
1	1	
2	3	7
	8	4
+ 1	2	6
4	4	7

Exercise 3.7

Solve the following. Practical Knowledge

Ans. **1.**

Shivam collected stamps = 45
His friend collected stamps = 29
Total Stamps they have = 74
So, they have 74 stamps altogether.

H	T	O
	4	5
+	2	9
	7	4

2.

		H T O
No. of girls	=	1 8
No. of boys	=	+ 2 5
Total Students	=	4 3

So, there are 43 students in all.

3.

		H T O
Priya read on Monday	=	2 3
She read more pages on Tuesday	=	+ 2 5
She read pages on Tuesday	=	4 8

So, she read 48 pages on Tuesday.

4.

		H T O
Lavi saved money.	=	1 4 5
Lavanya saved money.	=	+1 5 7
Total money saved by them.	=	3 0 2

So, they saved ₹302 in all.

NEP Communication

There is a letter for each addition problems. Write the letter in the box matching that number to find the answer of general knowledge questions.

Ans.

H T O	H T O	H T O	H T O	H T O	H T O
3 5 4	1 2 1	8 1	8 0 6	7 1	3 6 2
+1 4 9	+2 3 4	+ 4 5	+1 2 4	+ 1 7	+ 9 4
5 0 3	3 5 5	1 2 6	9 3 0	8 8	4 5 6
I	T	G	A	N	E

H T O	H T O	H T O	H T O	H T O
4 9 2	6 7 2	3 4 6	5 6 8	1 2 1
+2 1 1	+ 2 1	+1 9 6	+ 3 7	+ 0
7 0 3	6 9 3	5 4 2	6 0 5	1 2 1
R	W	D	L	H

Capital of India

N	E	W	D	E	L	H	I
88	456	693	542	456	605	121	503

National river of India	G	A	N	G	A
	126	930	88	126	930
National animal of India	T	I	G	E	R
	355	503	126	456	703

Multiple Choice Questions (MCQS)

Choose the correct option : Creative Thinking

Ans. 1. a 2. a 3. b 4. c

Chapter

4 Subtraction

Let's Recall

Find how many kites were left?

Ans. Kite seller had 16 red kites. He sold 7 out of these.

So, 9 red kites are left with him.

	T	O
	1	6
–		7
	0	9

He had 19 blue kites. He sold 9 out of it.

So, 10 blue kites are left with him.

	T	O
	1	9
–		9
	1	0

Exercise 4.1

1. Fill in the blanks on the basis of subtraction facts. Analytical Skills

Ans.
a. 43 – 0 = **43** b. 18 – 1 = **17** c. 62 – 0 = **62**
d. 34 – 0 = **34** e. 33 – 1 = **32** f. 54 – 54 = **0**
g. 67 – 1 = **66** h. 50 – 50 = **0** i. 56 – 56 = **0**
j. 33 – 1 = **32** k. 77 – 77 = **0** l. 89 – 0 = **89**

Exercise 4.2

1. Find the difference : Sustainable Development Goals

Ans. a.

	T	O
	8	7
–	5	1
	3	6

b.

	T	O
	4	6
–	1	6
	3	0

c.

	T	O
	9	4
–	6	0
	3	4

d.

	T	O
	7	3
–	3	1
	4	2

e.

	T	O
	6	9
–	3	6
	3	3

f.

	T	O
	4	9
–	3	1
	1	8

g.

	T	O
	6	9
–	3	5
	3	4

h.

	T	O
	5	3
–	5	0
	0	3

Exercise 4.3

1. Find the difference : Experiential Learning

Ans. a.

	T	O
	3	14
	~~4~~	4
–	2	9
	1	5

b.

	T	O
	7	18
	~~8~~	8
–	2	9
	5	9

c.

	T	O
	8	12
	~~9~~	2
–	6	5
	2	7

d.

	T	O
	6	14
	~~7~~	4
–	2	8
	4	6

e.

	T	O
	5	12
	~~6~~	2
–	1	8
	4	4

f.

	T	O
	7	10
	~~8~~	0
–	5	4
	2	6

g.

	T	O
	8	16
	~~9~~	6
–	3	7
	5	9

h.

	T	O
	2	13
	~~3~~	3
–	2	9
	0	4

2. Arrange in columns and subtract. Writing Skills

Ans. a.

	T	O
	7	16
	~~8~~	~~6~~
–	7	8
	0	8

b.

	T	O
	8	15
	~~9~~	~~5~~
–	4	6
	4	9

c.

	T	O
	7	12
	~~8~~	~~2~~
–	6	3
	1	9

d.

	T	O
	6	10
	~~7~~	~~0~~
–	5	5
	1	5

e.

	T	O
	7	10
	~~8~~	~~0~~
–	7	5
	0	5

f.

	T	O
	4	10
	~~5~~	~~0~~
–	1	9
	3	1

g.

	T	O
	6	13
	~~7~~	~~3~~
–	3	6
	3	7

h.

	T	O
	6	12
	~~7~~	~~2~~
–	5	6
	1	6

Higher Order Thinking Skills (HOTS)

Ans. Paul

Exercise 4.4

1. Find the difference and check your answer using addition.

Cross-Curricular Learning/ Subject Integration

Ans. a.

	T	O
	6	8
–	4	2
	2	6

	T	O
	2	6
+	4	2
	6	8

b.

	T	O
	7	2
–	2	4
	4	8

	T	O
	4	8
+	2	4
	7	2

c.

	T	O
	9	1
–	5	6
	3	5

	T	O
	3	5
+	5	6
	9	1

d.

	T	O
	2	5
–	1	3
	1	2

	T	O
	1	2
+	1	3
	2	5

2. Arrange in columns and subtract. Also, check your answer.

Problem Solving and Decision Making

Ans. a.

	T	O
	7	5
–	2	8
	4	7

	T	O
	4	7
+	2	8
	7	5

b.

	T	O
	4	6
–	2	7
	1	9

	T	O
	1	9
+	2	7
	4	6

c.

	T	O
	9	3
–	1	8
	7	5

	T	O
	7	5
+	1	8
	9	3

d.

	T	O
	5	4
–	2	7
	2	7

	T	O
	2	7
+	2	7
	5	4

e.

	T	O
	6	4
–	4	9
	1	5

	T	O
	1	5
+	4	9
	6	4

f.

	T	O
	8	0
–	4	3
	3	7

	T	O
	3	7
+	4	3
	8	0

Exercise 4.5

1. Find the difference :

Collaboration

Ans. a.

	H	T	O
	5	6	7
–	3	2	1
	2	4	6

b.

	H	T	O
	6	5	4
–	4	3	3
	2	2	1

c.

	H	T	O
	6	1	7
–	3	1	5
	3	0	2

d.

	H	T	O
	6	2	1
–	3	2	1
	3	0	0

e.

	H	T	O
	5	4	5
–	2	2	3
	3	2	2

f.

	H	T	O
	9	4	5
–	4	3	3
	5	1	2

g.

	H	T	O
	5	6	5
–	3	4	5
	2	2	0

h.

	H	T	O
	6	3	8
–	2	3	4
	4	0	4

Exercise 4.6

1. Add the following.

Ans. a.

	H	T	O
	5	15	14
	~~6~~	~~6~~	~~4~~
–	4	6	5
	1	9	9

b.

	H	T	O
	4	14	12
	~~5~~	~~5~~	~~2~~
–	4	5	6
	0	9	6

c.

	H	T	O
	6	9	11
	~~7~~	~~0~~	~~1~~
–	3	4	5
	3	5	6

d.

	H	T	O
	5	15	12
	~~6~~	~~6~~	~~2~~
–	2	6	4
	3	9	8

e.

	H	T	O
	2	18	
	~~3~~	~~8~~	~~9~~
–	1	9	2
	1	9	7

f.

	H	T	O
	8	14	10
	~~9~~	~~5~~	~~0~~
–	3	6	4
	5	8	6

g.

	H	T	O
	5	9	15
	~~6~~	~~0~~	~~5~~
–	2	5	8
	3	4	7

h.

	H	T	O
	2	16	16
	~~3~~	~~7~~	~~6~~
–	2	8	8
	0	8	8

2. Arrange in columns and subtract. Also check the answer.

Ans. a.

H	T	O
6	4	3
− 4	5	7
1	8	6

Check :

H	T	O
1	8	6
+ 4	5	7
6	4	3

b.

H	T	O
6	5	1
− 4	8	3
1	6	8

Check :

H	T	O
1	6	8
+ 4	8	3
6	5	1

c.

H	T	O
9	0	0
− 2	5	4
6	4	6

Check :

H	T	O
6	4	6
+ 2	5	4
9	0	0

d.

H	T	O
2	2	0
− 1	2	5
	9	5

Check :

H	T	O
	9	5
+ 1	2	5
2	2	0

e.

H	T	O
3	1	8
− 2	3	0
	8	8

Check :

H	T	O
	8	8
+ 2	3	0
3	1	8

f.

H	T	O
8	1	2
− 6	1	3
1	9	9

Check :

H	T	O
1	9	9
+ 6	1	3
8	1	2

g.

H	T	O
4	2	3
− 2	3	3
1	9	0

Check :

H	T	O
1	9	0
+ 2	3	3
4	2	3

h.

H	T	O
6	3	0
− 5	7	1
	5	9

Check :

H	T	O
	5	9
+ 5	7	1
6	3	0

Exercise 4.7

Solve the following :

Ans. **1.**

Total Pages in a book =
Kini has read pages =
Left Unread pages. =
Ans. 18 pages are left unread.

H	T	O
	9	6
−	7	8
	1	8

2.

Total Balloons =
Balloons are sold =
Unsold balloons =
Ans. 5 balloons are left unsold.

H	T	O
	5	5
−	5	0
	0	5

3. Manav has marbles =
less marbles Ajay has than Manav =
Ajay has marbles =
Ans. Ajay has 37 marbles.

	H	T	O
	6	5	
–	2	8	
	3	7	

4. Viny ordered pastries =
Pastries were eaten =
Pastries left =
Ans. So, 17 pastries were left.

	H	T	O
	6	2	
–	4	5	
	1	7	

5. Table Packets of chips =
sold packet =
left packets =
Ans. 394 packets of chips were left.

	H	T	O
	7	4	0
–	3	4	6
	3	9	4

Multiple Choice Questions (MCQs) Creative Thinking

Choose the correct option.

Ans. 1. a 2. c 3. c 4. a

NEP Experiential Learning

Ans. a. 651 passengers b. 89 passengers c. 611 passengers
d. 495 passengers e. 489 passengers

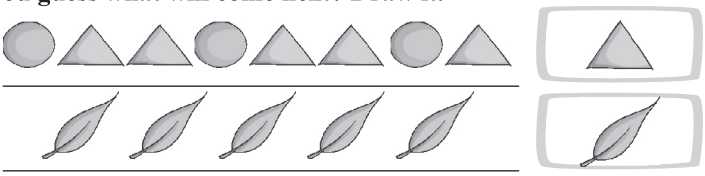
Chapter

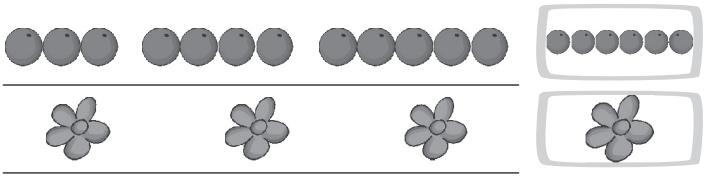
5 Patterns

Let's Recall

Can you guess what will come next? Draw it.

Ans.





Exercise 5.1

1. Complete these patterns. Art Integration

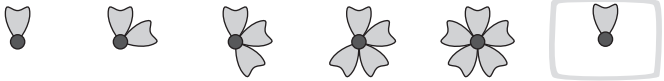
Ans. a.

b.

c.

d.

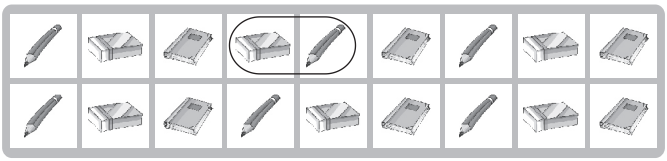
e.



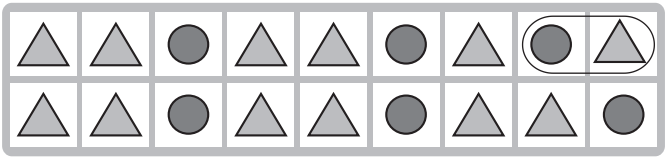
Higher Order Thinking Skills (HOTS)

In the patterns given below, one of the objects is at the wrong place. Find out and redraw the pattern.

Ans. a.



b.



Exercise 5.2

1. Study the patterns carefully and complete the following.

Ans. a. 2, 3, 4, 5, **6, 7, 8, 9, 10**

b. 25, 24, 23, 22, **21, 20, 19, 18, 17**

c. 13, 23, 33, 43, **53, 63, 73, 83, 93**

d. 12, 20, 28, 36, **44, 52, 60, 68, 76**

e. 100, 200, 300, 400, **500, 600, 700, 800, 900**

2. Now complete the following :

Ans. a. 51 + 52 + 53 + 54 + 55 + 56 + 57 + 58 + 59 + 60 = **555**

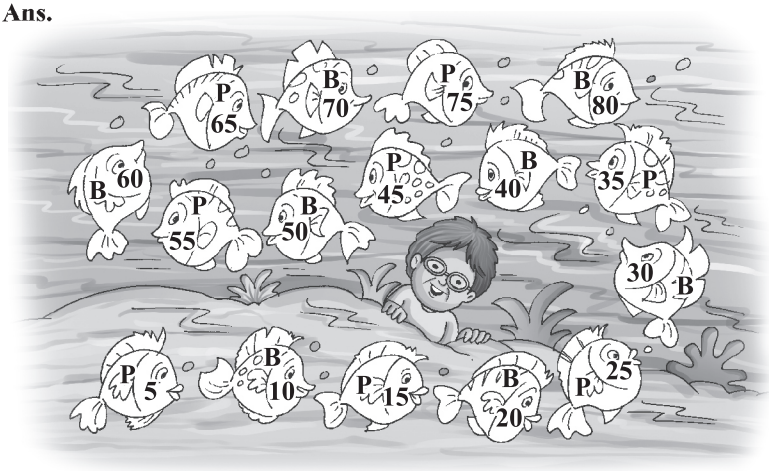
b. 61 + 62 + 63 + 64 + 65 + 66 + 67 + 68 + 69 + 70 = **655**

c. 71 + 72 + 73 + 74 + 75 + 76 + 77 + 78 + 79 + 80 = **755**

NEP

Colour the fish blue with even numbers and pink with odd numbers. Art Integration

Ans.



Chapter

6 Multiplication

Let's Recall

Fill in the boxes.

Experimental Learning

Ans. b. 

4 apples + 4 apples + 4 apples = 12 apples

So, 3 times 4 = 12 or 3 × 4 = 12

c. 

3 flowers + 3 flowers + 3 flowers = 9 flowers

So, 3 times 3 = 9 or 3 × 3 = 9

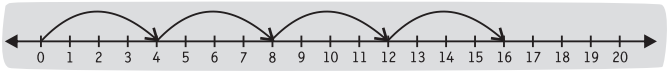
Exercise 6.1

1. Look at the multiplication shown on the number line and fill in the boxes.

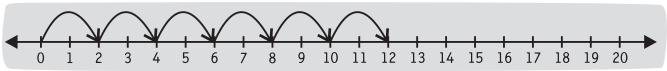
Art Integration

Ans. a. 

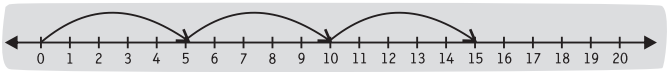
3 jumps of 3 equals 9 So, 3 × 3 = 9

b. 

4 jumps of 4 equals 16 So, 4 × 4 = 16

c. 

6 jumps of 2 equals 12 So, 6 × 2 = 12

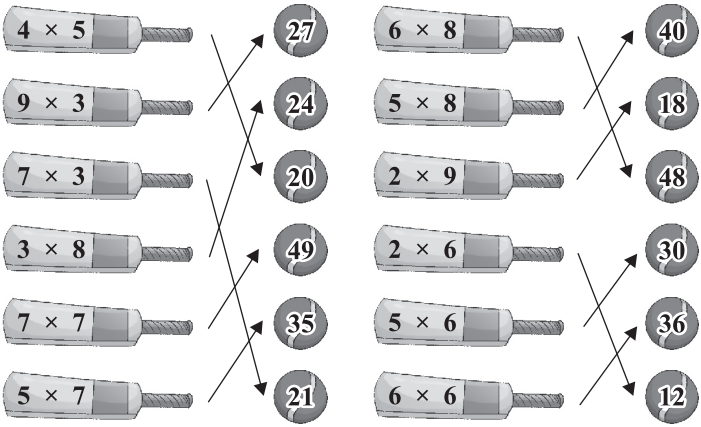
d. 

3 jumps of 5 equals 15 So, 3 × 5 = 15

Exercise 6.2

1. Match the following : Critical Thinking

Ans.



2. Use the multiplication tables to fill in the blanks. Subject Enrichment

Ans.

3 × 2 = 6	7 × 8 = 56	6 × 3 = 18
9 × 5 = 45	9 × 2 = 18	6 × 9 = 54
4 × 7 = 28	8 × 8 = 64	4 × 6 = 24
5 × 3 = 15	10 × 5 = 50	10 × 10 = 100
6 × 10 = 60	9 × 9 = 81	8 × 3 = 24

Exercise 6.3

1. Fill in the boxes. Collaboration

Ans.

a. 6 × 2 = 2 × 6 b. 4 × 1 = 4 c. 16 × 0 = 0

d. 9 × 7 = 7 × 9 e. 30 × 0 = 0 f. 21 × 1 = 21

g. 39 × 1 = 1 × 39 h. 35 × 1 = 35 i. 0 × 10 = 0

Exercise 6.4

1. Find the product using multiplication tables. Analytical Skills

Ans. a.

T	O
	1
×	2
	2

b.

T	O
	3
×	4
1	2

c.

T	O
	5
×	9
4	5

d.

T	O
	7
×	9
6	3

e.

T	O
	4
×	7
2	8

f.

T	O
	6
×	9
5	4

g.

T	O
	3
×	6
1	8

h.

T	O
	2
×	8
1	6

Exercise 6.5

1. Find the product. Life Skill and Values

Ans. a.

T	O
3	0
×	3
9	0

b.

T	O
2	1
×	2
4	2

c.

T	O
4	3
×	2
8	6

d.

T	O
2	4
×	2
4	8

e.

T	O
2	3
×	3
6	9

f.

T	O
1	2
×	3
3	6

g.

T	O
2	0
×	4
8	0

h.

T	O
1	1
×	5
5	5

2. Multiply. Subject Enrichment

Ans. a.

H	T	O
1	3	1
×		3
3	9	3

b.

H	T	O
2	2	4
×		2
4	4	8

c.

H	T	O
3	2	3
×		3
9	6	9

d.

H	T	O
1	3	0
×		2
2	6	0

e.

H	T	O
1	0	1
×		6
6	0	6

f.

H	T	O
2	0	2
×		4
8	0	8

g.

H	T	O
7	8	6
×		1
7	8	6

h.

H	T	O
4	3	1
×		2
8	6	2

Exercise 6.6

1. Find the product. Art Integration

Ans. a.

H	T	O
	2	
	4	9
	×	3
1	4	7

b.

H	T	O
	1	
	7	2
	×	9
6	4	8

c.

H	T	O
	1	
	7	7
	×	2
1	5	4

d.

H	T	O
	3	
	6	9
	×	4
2	7	6

e.

H	T	O
	4	
	6	5
	×	8
5	2	0

f.

H	T	O
	2	
	2	4
	×	7
1	6	8

g.

H	T	O
	1	
	3	3
	×	6
1	9	8

h.

H	T	O
	3	
	8	6
	×	5
4	3	0

2. Multiply the following :

Ans. a.

H	T	O
1	1	
2	5	8
	×	2
5	1	6

b.

H	T	O
2	3	
1	6	9
	×	4
6	7	6

c.

H	T	O
3	2	
1	7	4
	×	5
8	7	0

d.

H	T	O
3	1	
1	6	3
	×	6
9	7	8

e.

H	T	O
1	2	
1	2	3
	×	8
9	8	4

f.

H	T	O
	4	
1	0	5
	×	9
9	4	5

g.

H	T	O
	4	
1	0	7
	×	7
7	4	9

h.

H	T	O
2	3	
1	3	6
	×	6
8	1	6

Higher Order Thinking Skills (HOTS)

Multiply mentally.

Ans. 1. $33 \times 5 =$ 165 2. $18 \times 9 =$ 162 3. $15 \times 10 =$ 150

4. $25 \times 3 =$ 75 5. $15 \times 2 =$ 30 6. $30 \times 6 =$ 180

Exercise 6.7

Solve the following :

Ans.

1.

		H	T	O
1 lorry can hold bags of rice	=	1	3	4
No. of lorries	=		×	3
Total no. of bags	=	4	0	2

Ans. 3 lorries can hold 402 bags of rice.

2.

		H	T	O
Each garland has flowers	=		3	2
No. of garlands	=		×	5
Total no. of flowers	=	1	6	0

Ans. 160 flowers has been used in all.

3.

		H	T	O
No. of benches	=		2	8
Students can sit on a bench	=		×	3
Total no. of students	=		8	4

Ans. 84 students can sit in the class.

4.

		H	T	O
No. of kites in a bundle	=	1	2	0
No. of bundles	=		×	5
Total no. of kites	=	6	0	0

Ans. There are 600 kites in all.

5.

		H T O
Books in each shelf	=	1 6 4
No. of shelves	=	× 4
Total no. of books	=	6 5 6

Ans. There are 656 books in all.

Multiples Choice Questions (MCQs)

Choose the correct option : Creative Thinking

Ans. 1. b 2. a 3. c 4. a

NEP

Find out, how much they spent. Life Skill and Values

Ans. 1.

	₹ 2 5
	× 5
	₹ 1 2 5

2.

	₹ 1 3 0
	× 2
	₹ 2 6 0

3.

	₹ 1 5
	× 7
	₹ 1 0 5

4.

	₹ 4 5
	× 8
	₹ 3 6 0

Chapter 7

Division

Let's Recall

Fill in the boxes by dividing the pictures in equal groups. One has been done for you. Experiential Learning

Ans.

2. 18 apples are shared equally among 3 boys.

18 ÷ 3 = 6

Each boy gets 6 apples.

3. 12 crayons are shared equally among 4 children.

12 ÷ 4 = 3

Each child gets 3 crayons.

15 pencils are shared equally among 5 girls.

4. $15 \div 5 =$ 3

Each girl gets 3 pencils.

Exercise 7.1

1. Fill in the blanks. Life Skill and Values

Ans. a. 10 balloons have been shared equally by 2 boys.
Each boy gets 5 balloons.
Division fact is, $10 \div 2 =$ 5

b. 8 cakes have been equally shared by 4 girls.
Each girl gets 2 cakes.
Division fact is, $8 \div 4 =$ 2

Divide by repeated subtraction. Practical Knowledge

Ans. a. **15 ÷ 5**

$\therefore 15 \div 5 =$ 3

b. **32 ÷ 8**

$\therefore 32 \div 8 =$ 4

c. **24 ÷ 6**

$\therefore 24 \div 6 =$ 4

d. **54 ÷ 9**
54 – 9 = 45
45 – 9 = 36
36 – 9 = 27
27 – 9 = 18
18 – 9 = 9
9 – 9 = 0

$\therefore 54 \div 9 =$ 6

e. **21 ÷ 3**
21 – 3 = 18
18 – 3 = 15
15 – 3 = 12
12 – 3 = 9
9 – 3 = 6
6 – 3 = 3
3 – 3 = 0

$\therefore 21 \div 3 =$ 7

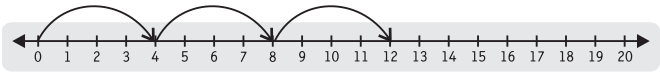
f. **16 ÷ 2**
16 – 2 = 14
14 – 2 = 12
12 – 2 = 10
10 – 2 = 8
8 – 2 = 6
6 – 2 = 4
4 – 2 = 2
2 – 2 = 0

$\therefore 16 \div 2 =$ 8

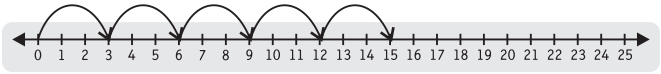
Exercise 7.2

Use the number line to find the answers. Art Integration

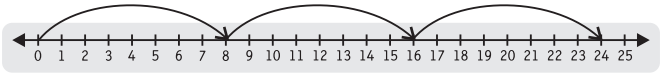
Ans. a. $12 \div 4 =$ **3**



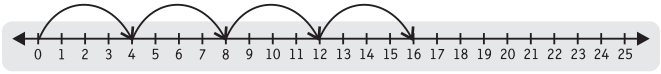
b. $15 \div 3 = \mathbf{5}$



c. $24 \div 8 = \mathbf{3}$



d. $16 \div 4 = \mathbf{4}$



Exercise 7.3

1. Fill in the boxes with multiplication and division facts.

Communication

Ans. a. $4 \times 6 = 24$ → $24 \div 4 = 6$, $24 \div 6 = 4$

b. $4 \times 8 = 32$ → $32 \div 8 = 4$, $32 \div 4 = 8$

c. $9 \times 5 = 45$ → $45 \div 5 = 9$, $45 \div 9 = 5$

d. $6 \times 8 = 48$ → $48 \div 6 = 8$, $48 \div 8 = 6$

Higher Order Thinking Skills (HOTS)

1. $35 \div 7 = 5$ 2. $20 \div 5 = 4$

Exercise 7.4

Fill in the boxes.

Integrated Approach

Ans. a. $13 \div 1 = 13$ b. $4 \div 4 = 1$ c. $7 \div 7 = 1$

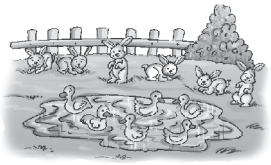
d. $8 \div 1 =$ 8 e. $5 \div 5 =$ 1 f. $20 \div 20 =$ 1

g. $6 \div 1 =$ 6 h. $9 \div$ 9 $= 1$ i. 10 $\div 1 = 10$

Higher Order Thinking Skills (HOTS)

Ans. How many rabbits are there? 2

How many ducks are there? 4



Exercise 7.5

1. Divide and find the quotient.

Ans. a.

$$\begin{array}{r} 8 \\ 4\overline{)32} \\ -\,32 \\ \hline 00 \end{array}$$

b.

$$\begin{array}{r} 6 \\ 2\overline{)12} \\ -\,12 \\ \hline 00 \end{array}$$

c.

$$\begin{array}{r} 5 \\ 5\overline{)25} \\ -\,25 \\ \hline 00 \end{array}$$

d.

$$\begin{array}{r} 6 \\ 6\overline{)36} \\ -\,36 \\ \hline 00 \end{array}$$

2. Solve with the help of long division.

Ans. a.

$$\begin{array}{r} 33 \\ 3\overline{)99} \\ -\,9 \\ \hline 9 \\ -\,9 \\ \hline 0 \end{array}$$

b.

$$\begin{array}{r} 6 \\ 6\overline{)36} \\ -\,36 \\ \hline 00 \end{array}$$

c.

$$\begin{array}{r} 6 \\ 4\overline{)24} \\ -\,24 \\ \hline 00 \end{array}$$

d.

$$\begin{array}{r} 33 \\ 2\overline{)66} \\ -\,6 \\ \hline 6 \\ -\,6 \\ \hline 0 \end{array}$$

Exercise 7.6

Problem Solving and Decision Making

1. Divide and find the quotient and the remainder.

Ans. a.

$$\begin{array}{r} 4\ \text{Q} \\ 4\overline{)18} \\ -\,16 \\ \hline 2\ \text{R} \end{array}$$

b.

$$\begin{array}{r} 7\ \text{Q} \\ 6\overline{)45} \\ -\,42 \\ \hline 3\ \text{R} \end{array}$$

c.

$$\begin{array}{r} 7\ \text{Q} \\ 5\overline{)39} \\ -\,35 \\ \hline 4\ \text{R} \end{array}$$

d.

$$\begin{array}{r} 7\ \text{Q} \\ 8\overline{)63} \\ -\,56 \\ \hline 7\ \text{R} \end{array}$$

e.
$$\begin{array}{r} 9\ \text{Q} \\ 3\overline{)29} \\ -\ 27 \\ \hline 2\ \text{R} \end{array}$$

f.
$$\begin{array}{r} 7\ \text{Q} \\ 8\overline{)61} \\ -\ 56 \\ \hline 5\ \text{R} \end{array}$$

g.
$$\begin{array}{r} 8\ \text{Q} \\ 4\overline{)35} \\ -\ 32 \\ \hline 3\ \text{R} \end{array}$$

h.
$$\begin{array}{r} 6\ \text{Q} \\ 3\overline{)19} \\ -\ 18 \\ \hline 1\ \text{R} \end{array}$$

Exercise 7.7

Solve the following :

Knowledge of India

Ans.

1.

Total Money = ₹ 18
Cost of each orange = ₹ 2
No. of oranges will be bought = 18 ÷ 2
= 9 oranges

$$\begin{array}{r} 9 \\ 2\overline{)18} \\ -\ 18 \\ \hline 00 \end{array}$$

So, the number of oranges is 9.

2.

Total entry fees = ₹ 45
No. of persons = 5
So, Each ticket costs = ₹ 45 ÷ 5
= ₹ 9

$$\begin{array}{r} 9 \\ 5\overline{)45} \\ -\ 45 \\ \hline 00 \end{array}$$

So, cost of one ticket is ₹9.

3.

Total seats in a hall = 72
Seats in each row = 9
No. of rows = 72 ÷ 9
= 8 rows

$$\begin{array}{r} 8 \\ 9\overline{)72} \\ -\ 72 \\ \hline 00 \end{array}$$

So, there are 8 rows of seats in the hall.

4.

Total No. of Samosas = 12
No. of Friends = 3
No. of Samos as each friends gets = 12 ÷ 3
= 4

$$\begin{array}{r} 4 \\ 3\overline{)12} \\ -\ 12 \\ \hline 00 \end{array}$$

So, you will give 4 samosas to each friend.

5.

Children in Arun's class	=	20
Children can sit on one seat	=	4
No. of seats required	=	20 ÷ 4
	=	5 seats

$$4\overline{)20}\,5 \quad -20 \quad 00$$

So, 5 seats are required.

Multiple Choice Questions (MCQs)

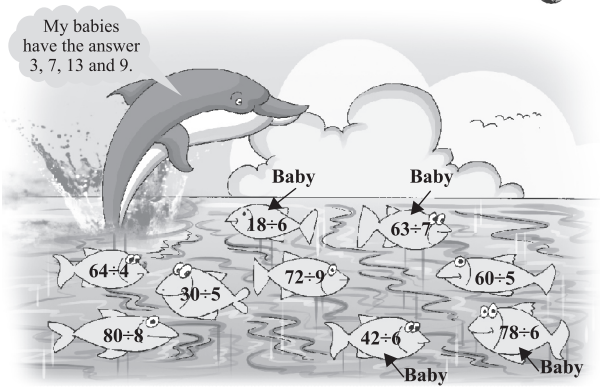
Choose the correct option : Creative Thinking

Ans. 1. c 2. a 3. c 4. b

NEP

Solve the division sums on the small fish. Match the baby fish with its mother fish. Collaboration

Ans.

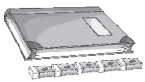


Chapter **8**

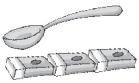
Measurement

Let's Recall

1. How long? Experiential Learning

Ans. a. 

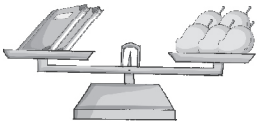
5 erasers long.

b. 

3 erasers long.

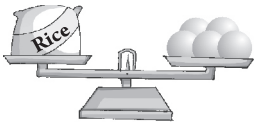
2. How heavy? Practical Knowledge

Ans. a.



2 books weigh as much as **5** mangoes.

b.



A rice bag weighs as much as **5** stones.

Exercise 8.1

1. Using the ruler drawn, find the length of the given objects.

Ans. a. **4** cm b. **12** cm c. **9** cm d. **3** cm

2. Using a ruler, measure the lengths of the following lines.

Ans. b. P ●——————● Q

PQ is **5.5** centimetres long.

c. X ●——————● Y

XY is **5** centimetres long.

d. L ●————————————● M

LM is **8.5** centimetres long.

Exercise 8.2

1. Solve these : Practical Knowledge

Ans. a.

m	cm
83	10
+62	30
145	40

b.

m	cm
25	45
−11	20
14	25

c.

m	cm
121	15
+39	78
160	93

d.

m	cm
58	95
−24	32
34	63

e.

m	cm
99	65
+35	43
135	08

f.

m	cm
47	92
+10	30
58	22

Fun With Maths

1. Shivangi has a 50 cm long ribbon.
She cuts off 25 cm.
How much ribbon is left?
For what purpose(s) do you use a ribbon at home?

cm
5 0
– 2 5
2 5

Exercise 8.3

1. Tick (✓) the correct unit in which you will measure the following.

Life Skill and Values

Ans.

	g	kg			g	kg			g	kg	
a.	✓			b.	✓			c.		✓	
d.	✓			e.		✓		f.	✓		

2. Write the weight of the items being weighed.

Knowledge of India

Ans.
a. Weight of the salt bag = **1 kg**
b. Weight of the book = **500 g**
c. Weight of the soap bar = **75 g**
d. Weight of the pumpkin = **2 kg**

Exercise 8.4

Solve these.

Integrated Approach

Ans.

a.

kg	g
3	530
+ 5	265
8	795

b.

kg	g
17	167
+ 12	320
29	487

c.

kg	g
65	438
– 21	325
44	113

d.

kg	g
8	836
– 3	542
5	294

e.

kg	g
11	660
– 6	475
5	185

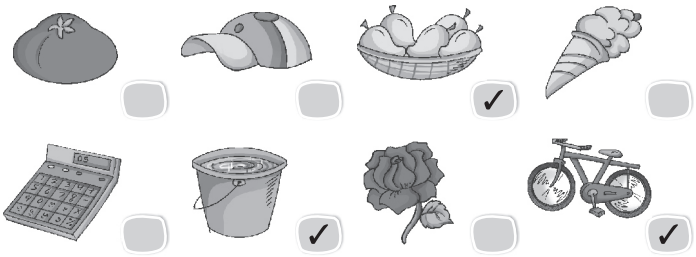
f.

kg	g
93	195
+ 28	073
121	268

Higher Order Thinking Skills (HOTS)

Put a (✓) in the boxes for those objects that weigh more than 1 kg.

Ans.



Exercise 8.5

1. Tick (✓) the correct unit. Which standard unit will you use to measure the capacity of.

Practical Knowledge

Ans. a. b. c.

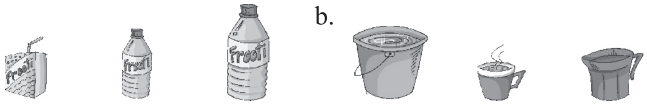
1 L✓ / 1 mL

200 mL✓ / 2 L

2 L✓ / 200 mL

2. Tick (✓) the container that has more capacity and cross (✗) the container that has less capacity.

Ans. a. b.



✗ ✓ ✓ ✗

Exercise 8.6

Solve these.

Integrated Approach

Ans. a.

L	mL
4	615
+ 2	250
6	865

b.

L	mL
75	270
+ 83	320
158	590

c.

L	mL
10	520
+ 21	135
31	655

d.

L	mL
6	740
– 4	275
2	465

e.

L	mL
8	630
+ 5	487
14	117

f.

L	mL
63	930
– 42	728
21	202

Exercise 8.7

Solve these. Practical Knowledge

Ans.

1.

Red Ribbon = 12 m
Blue Ribbon = + 37 m
Total length = 49 m
Answer. 49 m.

2.

Total Pipe = 14 m
Sold Pipe = – 8 m
Left pipe = 6 m
Answer. 6 m.

3.

Potato weights = 810 g
Onion weights = – 520 g
Onion lighter than potatoes = 290 g
Answer. 290 grams.

4.

Total Oil = 400 mL
Oil fell = – 75 mL
Left oil = 325 mL
Answer. 325 mL.

Multiple Choice Questions (MCQs)

Choose the correct option. Creative Thinking

Ans. 1. b 2. a 3. a 4. b

NEP

Circle the unit you will use to measure the following. Critical Thinking

Ans. a. mL **L**✓  b. g **kg**✓  c. cm **m**✓ 

d. **km**✓ m  e. mL✓ L  f. g **kg**✓ 

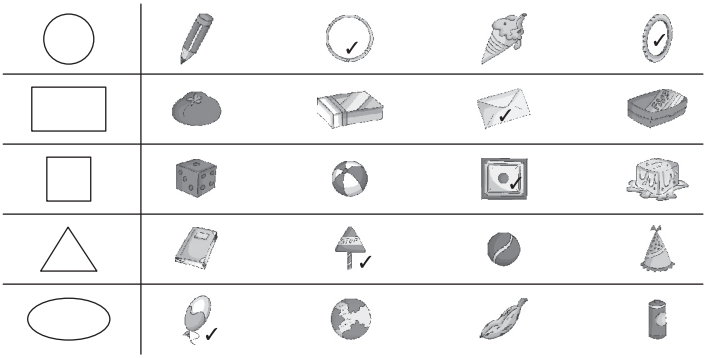
Chapter

9 Geometry

Let's Recall

Tick (✓) the objects which has the same shape as the one given on the left. One is done for you. Life Skill and Values

Ans.



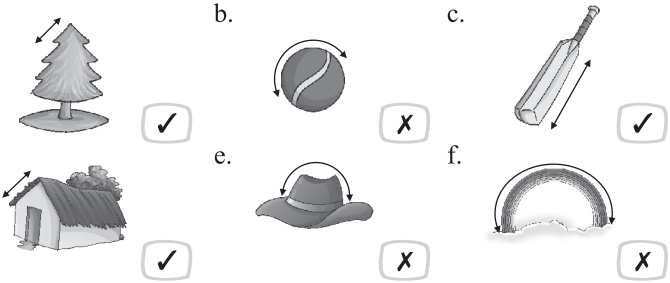
Exercise 9.1

1. Find the number of curved, horizontal, vertical and slanting lines in the figure shown. Experimental Learning

Ans. a. **15** b. **4** c. **15** d. **2**

2. Tick (✓) the pictures with straight lines and cross (✗) the pictures with curved lines. Cross-Curricular Learning/Subject Integration

Ans. a. b. c.

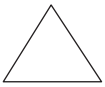


d. e. f.

Exercise 9.2

1. Write the number of sides and corners for each figure :

Collaboration

Ans. a.  **Three** sides. **Three** corners.

b.  **Four** sides. **Four** corners.

\ c.  **Four** sides. **Four** corners.

d.  **No** sides. **No** corners.

2. Tick (✓) the correct choice : Cross-Curricular Learning/Subject Integration

Ans. a. I have only 1 face. I am a cube/**sphere**. ✓

b. I have eight corners. I am a **cuboid**/cone.

c. I have 3 faces. I am a sphere/**cylinder**. ✓

d. I have one corner. I am a **cone**/cube. ✓

e. I have two edges. I am a **cylinder**/cone. ✓

3. Name the plane shapes we can get from the base of the given solid shapes :

Sustainable Development Goals

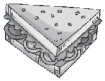
Ans. a.  Circle

b. 

Square

c.  Circle

d.  Rectangle

e.  Triangle

f.  Circle

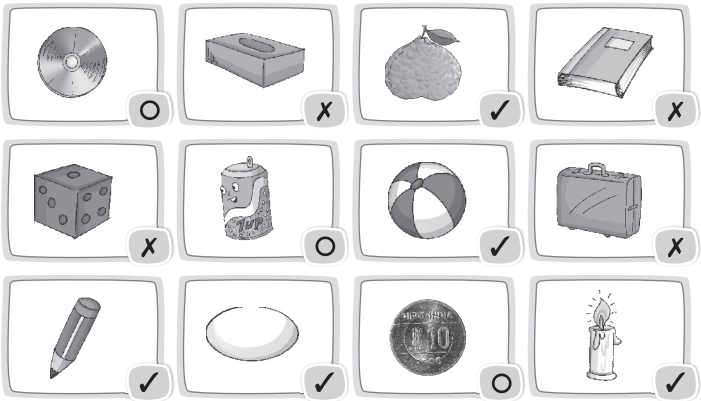
Higher Order Thinking Skills (HOTS)

a. I am a **cube**.
b. I am a **cuboid**.
c. I am a **cone**.
d. I am a **sphere**.

Exercise 9.3

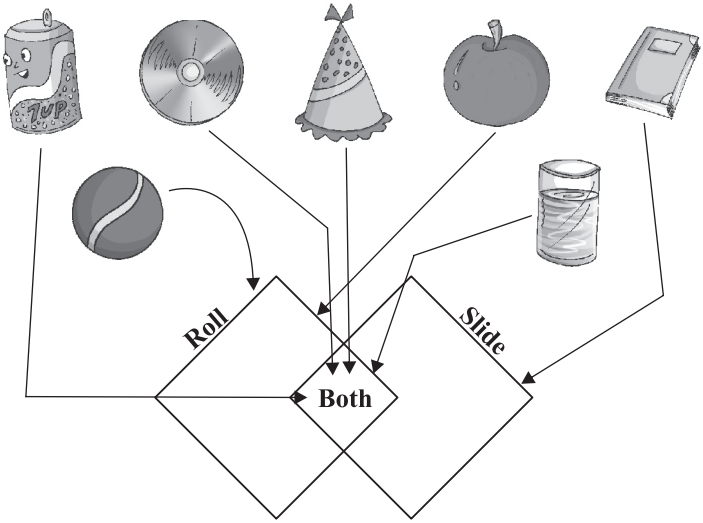
1. **Now try rolling or sliding the following objects. Tick (✓) the objects that roll. Put a cross (✗) against the objects that slides. Circle the ones that both roll or slide.** Life Skill and Values

Ans.



2. **Match the objects with the square they belong to. One has been done for you.**

Ans.



Multiple Choice Questions (MCQs)

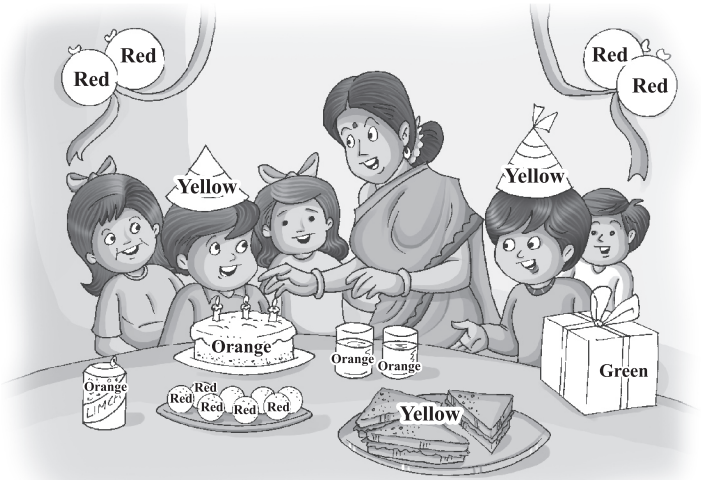
Choose the correct option. Creative Thinking

Ans. 1. b 2. c 3. a 4. b

NEP

Colour the objects in the given picture as directed. Creative Thinking

Ans.



Higher Order Thinking Skills (HOTS)

Ans. Cylinder

Chapter

10 Money

Let's Recall

Colour the notes and coin they spend for toys. Knowledge of India

Ans.

	buys		₹20	₹20	₹10	₹5	₹2	₹5	₹1
	buys		₹50	₹10	₹10	₹10	₹10	₹5	₹2	₹2
	buys		₹50	₹10	₹10	₹5	₹5	₹5	₹20
	buys		₹10	₹10	₹10	₹10	₹5	₹5	

Higher Order Thinking Skills (HOTS)

Now solve these :

Ans. 1. ₹ 7 = 700 p 2. ₹ 8 = 800 p

3. ₹ 5 and 25 p = 525 p 4. 400 p = ₹ 4

5. 900 p = ₹ 9 6. ₹ 3 and 50 p = 350 p

Exercise 10.1

1. Write in short. Knowledge of India

Ans. a. ₹ 50.35 b. ₹ 15.20 c. ₹ 16.60 d. ₹ 3.10

e. ₹ 95.05 f. ₹ 26.40 g. ₹ 77.00

2. Write in words : Analytical Skills

Ans. a. Thirty-eight rupees and forty-five paise

b. Fifteen rupees and ten paise

c. Sixty-five rupees and fifty paise

d. Twenty-five rupees and twenty-five paise.

3. How much money is it?

Ans. a. 15 rupees 25 paise b. 30 rupees 75 paise

c. 150 rupees 50 paise d. 105 rupees 50 paise

e. 67 rupees 50 paise f. 551 rupees 50 paise

Exercise 10.2

1. Look at the price tags. Write down the price and add to find the total cost. Sustainable Development Goals

Ans. a.

₹	p
5	00
+ 65	25
70	25

b.

₹	p
20	50
+ 50	00
70	50

c.

₹	p
5	75
+ 15	00
20	75

d.

₹	p
5	00
+ 20	50
25	50

e.

₹	p
50	00
+ 15	00
65	00

f.

₹	p
15	00
+ 20	50
25	50

Exercise 10.3

1. Sakshi purchased the following items from different shops. Help her to get right amount back from the shopkeepers.

Ans.

Integrated Approach

Items purchased	Money paid	Money received back
 ₹ 52		₹ 60 − 52 = 8
 ₹ 43.50		₹ 100.00 − 43.50 = 56.50
 ₹ 474		₹ 500 − 474 = 26
 ₹ 150		₹ 200 − 150 = 50

2. Subtract the rupees and paise.

Practical Knowledge

Ans. a.

₹	5 . 65
− ₹	2 . 50
₹	3 . 15

b.

₹	9 . 30
− ₹	5 . 45
₹	3 . 85

c.

₹	85 . 16
− ₹	49 . 12
₹	36 . 04

d.

₹ 80 . 75
– ₹ 52 . 18
₹ 28 . 57

e.

₹ 74 . 10
– ₹ 18 . 75
₹ 55 . 35

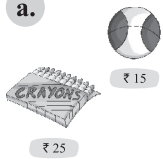
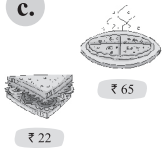
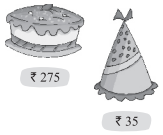
f.

₹ 90 . 00
– ₹ 45 . 25
₹ 44 . 75

NEP Life Skill and Values

Rahul purchase the following items from different shops. Help him to get the amount back from the shopkeepers.

Ans.

Item Purchased	Total Money	Money Paid	Money received back
a. 	₹ 25 + ₹ 15 ₹ 40		₹ 50 – ₹ 40 ₹ 10
b. 	₹ 30 + ₹ 40 ₹ 70		₹ 100 – ₹ 70 ₹ 30
c. 	₹ 65 + ₹ 22 ₹ 87		₹ 100 – ₹ 87 ₹ 13
d. 	₹ 275 + ₹ 35 ₹ 310		₹ 500 – ₹ 310 ₹ 190

e. 	₹ 25 + ₹ 60 ₹ 85		₹ 100 – ₹ 85 ₹ 15

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. c 3. a 4. b

Chapter

11 Time

Let's Recall

Look at the clocks and write the correct time in the box.

Ans.

Practical Knowledge

	He leaves for school at 7 o'clock	
	He takes his lunch at 2 o'clock	
	He goes out to play at 4 o'clock	
	He goes to bed at 10 o'clock	

Exercise 11.1

1. What time is it ? One has been done for you. Problem Solving and Decision Making

Ans. a. 3:30 half past 3 b. 10:30 half past 10 c. 1:30 half past 1

d. 5:30 half past 5 e. 8:30 half past 8 f. 12:30 half past 12

g. 6:00 6 o'clock h. 9:30 half past 9

2. Draw the hands to show the time given in the box. Collaboration

Ans. a.  half past 9

b.  1 : 30

c.  half past 6

d.  5 : 30

Exercise 11.2

1. Write the time shown by each clock in two ways. One has been done for you. Cross-Curricular Learning/Subject Integration

Ans. b.  4 : 45 Quarter to 5

c.  2 : 15 Quarter past 2

d.  8 : 45 Quarter to 9

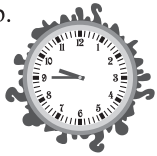
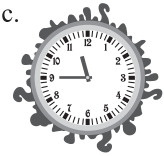
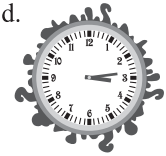
e.  3 : 45 Quarter to 4

f.  9 : 15 Quarter past 9

g.  12 : 15 Quarter past 12

h.  10 : 45 Quarter to 11

2. Draw the hour hand of the clock to show the given time : Life Skill and Values

Ans. a.  b.  c.  d. 

Exercise 11.3

1. Answer the following questions : Writing Skills

Ans. a. Seven b. Tuesday c. Sunday d. Monday

2. Fill in the blanks : Art Integration

Ans. a. **Sunday** comes before Monday.
b. Sunday comes after **Saturday**.
c. Friday comes after **Thursday**.
d. **Tuesday** comes before Wednesday.

3. Complete the table with the correct day : Collaboration

Ans.

Yesterday	Today	Tomorrow
Sunday	Monday	Tuesday
Friday	**Saturday**	**Sunday**
Tuesday	**Wednesday**	Thursday
Monday	Tuesday	**Wednesday**

Exercise 11.4

1. Look at the calender and answer the questions that follow. Subject Enrichment

Ans.

How many months have exactly 30 days? 4
Write their names.
April, June, September, November

How many months have 31 days? 7
Write their names.
January, March, May, July, August, October, December

Which month have neither 30 nov 31 days?? **February**

2. Write the month. Art Integration

Ans. Do it yourself.

Higher Order Thinking Skills (HOTS)

Complete the names of the months.

Ans. a. JANUARY b. APRIL c. MAY
d. OCTOBER e. NOVEMBER f. AUGUST

Exercise 11.5

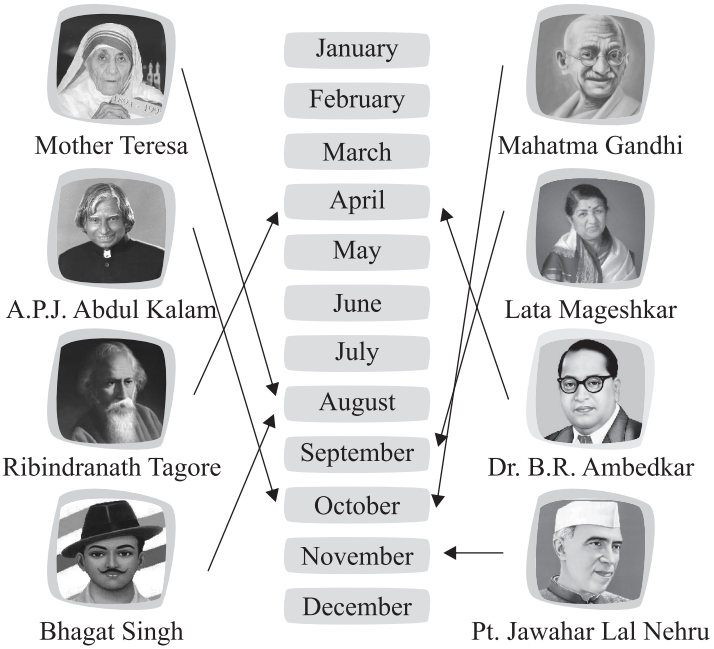
1. Fill in the blanks : Writing Skills

Ans. a. We use umbrella in the **Rainy** season.
b. We use cotton clothes in the **Summer** season.
c. We use woollen clothes in the **Winter** season.

NEP

Find the birthday month of these legends of India and match the picture with their birthday months. Integrated Approach

Ans.



Chapter

12 Data Handling

Let's Recall

Look, count and write, How many of each?

Ans.  4  1  5  2  3

Exercise 12.1

1. Complete the list of the things shown in the picture.

Ans.

Frog 	**4**	Bird 	**6**
Rabbit 	**1**	Ball 	**3**
Apple 	**5**	Girl 	**2**

Now answer the following questions.

Ans. **a**. 4 frogs b. 2 children c. 5 birds more

2. How many dancers are :

Ans. a. 4 b. 2 c. 3 d. 3

3. Sachin and Tony went to the zoo and saw some animals. They draw stars to show the number of each animal. Count the stars and answer the questions that follow.

Ans. a. One b. Monkey c. Eleven (11)

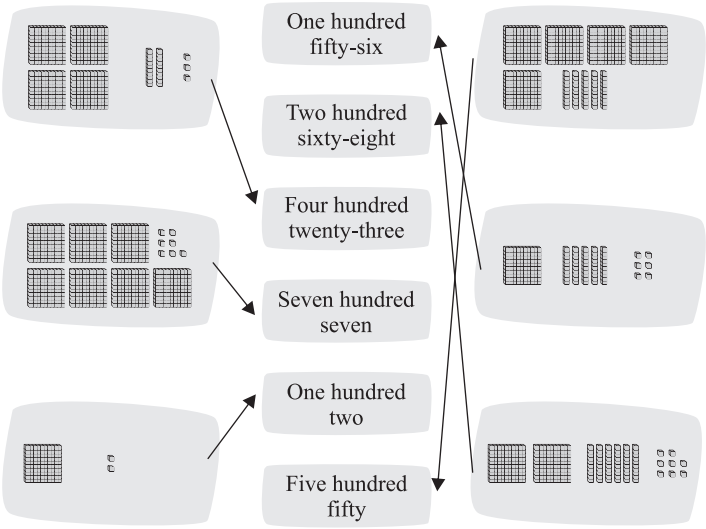
Chapter

1 Place Value

Let's Recall

Match the following with correct number name.

Ans.



Forming 4-digt numbers

Counting to thousands.

Ans. 1000 — **One thousand**
3000 — **Three thousands**
5000 — **Five thousands**
7000 — **Seven thousands**
9000 — **Nine thousands**

2000 — **Two thousands**
4000 — **Four thousands**
6000 — **Six thousands**
8000 — **Eight thousands**

Fun With Maths

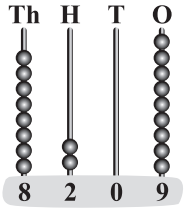
Write the number names and fill up the abacus. Take care that no spike can hold more than 9 beads :

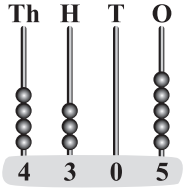
Ans.

1.

Th	H	T	O
8	2	0	9

Four thousand three hundred five





2.

Th	H	T	O
7	2	0	5

Seven thousand two hundred five.

Exercise 1 (a)

1. Write the numbers.

Ans. a.

Th	H	T	O
2	3	6	2

b.

Th	H	T	O
3	3	3	7

c.

Th	H	T	O
3	0	2	5

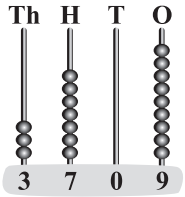
2. Count the beads and write the number and number name :

Ans.

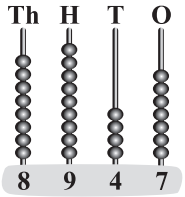
	Number	Number Name
a.	Th H T O 5 3 4 5	Five thousand three hundred forty-five.
b.	Th H T O 3 6 0 0	Three thousand six hundred.

3. Represent the number on the abacus :

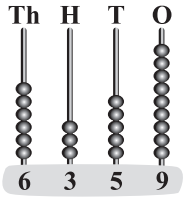
Ans. a. **3709**



b. **8947**



c. **6359**



4. Write the number names :

Ans. a. 7345 — **Seven thousand three hundred forty-five**

b. 3750 — **Three thousand seven hundred fifty**

c. 2357 — **Two thousand three hundred fifty-seven**

d. 9008 — **Nine thousand eight**

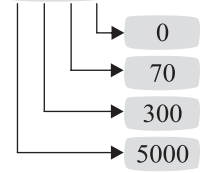
5. Write the number :

Ans. a. 9405 b. 2782 c. 1990

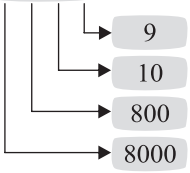
Exercise 1 (b)

1. Write the place values of each digit :

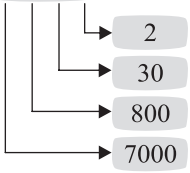
Ans. a. **5 3 7 0**



b. **8 8 1 9**



c. **7 8 3 2**



2. Write the place value of the coloured digit :

Ans. a. 5 b. 3000 c. 600 d. 600

3. Write the expanded form :

Ans. b. 4035 = **4** thousands + **0** hundreds + **3** tens + **5** ones
4000 + **0** + **30** + **5**

c. 5186 = **5** thousands + **1** hundred + **8** tens + **6** ones
5000 + **100** + **80** + **6**

4. Encircle the correct numeral :

Ans. b. i. (**9590**) ii. 9905 iii. 9095

c. i. (**3080**) ii. 38020 iii. 3008

Exercise 1 (c)

1. Compare each pair of numbers. Put > or < in the ☐ .

Ans. a. 6180 > 845 b. 7829 > 6059 c. 7592 > 7582

d. 2003 < 2008 e. 4113 > 4112 f. 7995 < 7997

g. 2716 > 2713 h. 6401 > 5400 i. 9830 > 8730

j. 1573 < 2451

2. Rewrite the numbers in increasing or ascending order :

Ans. a. On comparing the digits at hundreds and tens place, we get.

2	2	3	6
2	7	0	6
2	7	1	6
2	2	6	8
Same	2 < 7	0 < 1	

So, 2236 < 2268 < 2706 < 2716

7	1	9	1
2	7	2	9
7	9	9	3
7	2	9	2

$2 < 7 \quad 1 < 2 < 9$

b. On comparing the digits at thousands and hundreds place, we get.
So, $2729 < 7191 < 7292 < 7993$

c. On comparing the digits at thousands place, we get

5	4	9	4
6	5	4	3
4	3	5	9
1	4	9	6

So, $1496 < 4359 < 5494 < 6543$

$1 < 4 < 5 < 6$

4. Rewrite the numbers in decreasing or descending order :

Ans. a. On comparing the digits at thousands and hundreds place, we get
$6 > 2, \; 8 > 7 > 6 > 5$
So, $6592 > 2859 > 2759 > 2659$

2	6	5	9
2	8	5	9
2	7	5	9
6	5	9	2

$6 > 2 \quad 8 > 7 > 6$

3	4	5	0
0	3	4	5
5	4	3	0
4	3	5	0

b. On comparing the digits at thousands place, we get
$5 > 4 > 3 > 0$
So, $5430 > 4350 > 3450 > 345$

c. On comparing the digits at thousands and hundreds place, we get
$7 > 2, \; 7 > 4 > 2$
So, $7732 > 7432 > 7237 > 2377$

7	4	3	2
7	7	3	2
7	2	3	7
2	3	7	7

$7 > 2 \quad 7 > 4 > 2$

Fun With Maths

1. Which letters are present in even numbers in these words?

Ans. a. N, V, R, E b. A, H, M, T, C
c. N, I, O, M, N

Exercise 1 (d)

1. Form the smallest and greatest numbers using the given digits :

Ans. a. **3, 4, 1, 8**

On arranging the digits in descending order.

$8 > 4 > 3 > 1$

$\therefore$ The greatest number is 8431.

Now, on arranging the digits in ascending order.

$1 < 3 < 4 < 8$

$\therefore$ The smallest number is 1348.

b. **0, 4, 9, 3**

On arranging the digits in descending order.

$9 > 4 > 3 > 0$

$\therefore$ The greatest number is 9430.

Now, on arranging the digits in ascending order.

$0 < 3 < 4 < 9$

$\because$ The smallest 4-digit number is 3049 and not 0349 as 0 in the beginning of a number has no value.

$\therefore$ The smallest number is 3049.

c. **3, 5, 1, 9**

On arranging the digits in descending order.

$9 > 5 > 3 > 1$

$\therefore$ The greatest number is 9531.

Now, on arranging the digits in ascending order.

$1 < 3 < 5 < 9$

$\therefore$ The smallest number is 1359.

d. **9, 7, 8, 5**

On arranging the digits in descending order.

$9 > 8 > 7 > 5$

$\therefore$ The greatest number is 9875.

Now, on arranging the digits in ascending order.

$5 < 7 < 8 < 9$

$\therefore$ The smallest number is 5789.

2. Circle the correct rounded off number :

Ans. a. 48 = 40, (**50**) b. 323 = (**320**), 330

c. 456 = (**460**), 560 d. 32 = (**30**), 40

e. 64 = (**60**), 70 f. 79 = (**80**), 70

3. Separate and write the even and odd numbers into their respective boxes :

Ans. Even Numbers : 46, 170, 2060, 1850, 6344, 5030

Odd Numbers : 83, 231, 1645, 9867, 687, 715, 9247, 4881

Multiple Choice Questions (MCQs)

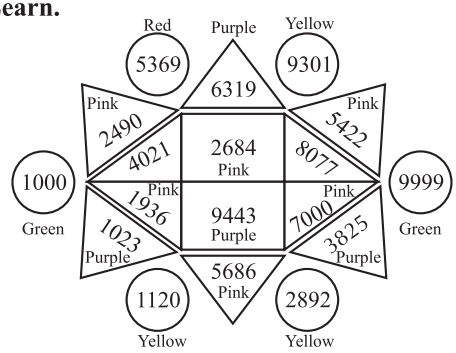
Choose the correct option. Creative Thinking

Ans. 1. a 2. a 3. c

NEP

Colour and Learn. Art Integration

Ans.



Chapter 2 Roman Numerals

Let's Recall

Do it yourself.

Exercise 2 (a)

1. Match the following :

Ans.

A	B
9	XXXV
15	XVIII
12	XX
28	XXVII
20	IX
18	XV
35	XII
27	XXVIII

2. Write the Hindu-Arabic numeral for :

Ans. a. **XXIV** ⇒ 10 + 10 + 4 = 24
b. **XXV** ⇒ 10 + 10 + 5 = 25
c. **XII** ⇒ 10 + 2 = 12
d. **XXIX** ⇒ 10 + 10 + 9 = 29
e. **XXXII** ⇒ 10 + 10 + 10 + 2 = 32
f. **XVIII** ⇒ 10 + 5 + 3 = 18

3. Compare and use >, < or = in each of the following :

Ans. a. IV < VI b. XXIX < XXXI
c. XXXVII > XXXIV d. XIII < XV
e. XX = XX f. XXXV > XXXIV

4. Write the answer in Roman numerals :

Ans. a. VI + IV = X b. X + XI = XXI
c. XIII – VI = VII d. IX – VIII = I
e. XXVI + IV = XXX f. XIX – IX = X

Fun With Maths

Write the time shown in the clock.

Ans. 4 o'clock.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. c 3. b 4. a 5. c

Chapter 3

Addition

Let's Recall

Help them to add and tick (✓) the correct option :

They saw.

Ans. 1. 179 stripes animals 2. 158 water animals
3. 181 birds

Exercise 3 (a)

1. Add :

Ans. a.

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

b.

	Th	H	T	O
	2	2	1	3
+	5	3	8	2
	7	5	9	5

c.

	Th	H	T	O
	5	2	5	7
+	3	5	3	1
	8	7	8	8

d.

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

e.

	Th	H	T	O
	5	0	0	8
+	1	2	5	0
	6	2	5	8

f.

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

g.

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

h.

	Th	H	T	O
	4	4	3	6
+	2	5	3	2
	6	9	6	8

2. Solve these sums in your notebook :

Ans. a.

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

b.

	Th	H	T	O
	2	3	6	4
+	7	1	2	3
	9	4	8	7

c.

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

d.

	Th	H	T	O
	5	2	1	7
+	3	2	5	2
	8	4	6	9

e.

	Th	H	T	O
	4	3	0	2
	3	0	2	4
+	2	4	3	0
	9	7	5	6

f.

	Th	H	T	O
	3	7	2	6
	2	1	5	2
+	1	0	1	1
	6	8	8	9

g.

	Th	H	T	O
	3	5	6	7
+	4	2	2	2
	7	7	8	9

h.

	Th	H	T	O
	6	0	0	0
+	1	0	0	0
	7	0	0	0

i.

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

Exercise 3 (b)

1. Add :

Ans. a.

Th	H	T	O
		1	
	3	5	3 7
+	3	4	2 4
	6	9	6 1

b.

Th	H	T	O
	1	1	
	6	7	2 8
+	2	4	6 6
	9	1	9 4

c.

Th	H	T	O
	1	1	1
	5	9	9 8
+	2	3	9 8
	8	3	9 6

d.

Th	H	T	O
		1	1
	3	7	5 4
+	2	1	7 6
	5	9	3 0

2. Solve in your notebooks :

Ans. a.

Th	H	T	O
	1	1	1
	1	9	9 9
+	6	3	9 9
	8	3	9 8

$\therefore$ 1999 + 6399 = 8398

b.

Th	H	T	O
		1	1
	5	8	9 7
+	4	0	3 3
	9	9	3 0

$\therefore$ 5897 + 4033 = 9930

c.

Th	H	T	O
		1	1
	4	6	4 5
+	5	2	7 6
	9	9	2 1

$\therefore$ 4645 + 5276 = 9921

d.

Th	H	T	O
		1	1
	7	3	5 4
+	1	4	8 7
	8	8	4 1

$\therefore$ 7354 + 1487 = 8841

e.

Th	H	T	O
		1	1
	5	9	4 3
+	1	2	6 8
	7	2	1 1

$\therefore$ 5943 + 1268 = 7211

f.

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

$\therefore$ 4235 + 4583 = 8818

3. Add the following :

Ans. a.

Th	H	T	O
1	1	1	
1	3	8	8
2	1	8	8
+ 1	8	2	0
5	3	9	6

b.

Th	H	T	O
1	1	1	
5	3	4	8
		9	2
+ 1	7	3	2
7	1	7	2

c.

Th	H	T	O
1	2	1	
2	9	4	5
		7	0
+ 2	7	8	8
5	8	0	3

Exercise 3 (c)

1. First find the actual sum and then estimated sum :

Ans. a.

2 3	→	2 0
+ 4 8	→	+ 5 0
7 1		7 0

b.

3 6	→	4 0
+ 5 9	→	+ 6 0
9 5		1 0 0

c.

6 2	→	6 0
+ 2 7	→	+ 3 0
8 9		9 0

d.

2 4	→	2 0
+ 6 9	→	+ 7 0
9 3		9 0

2. Estimate the following sums by rounding off the addends as mentioned.

Ans. a.

4631	→	4600
3776	→	3800
1215	→	+ 1200
		9600

So, 4631 + 3776 + 1215
= 9600 (estimated value)

b.

2860	→	3000
5296	→	5000
1425	→	+ 1000
		9000

So, 2860 + 5296 + 1425
= 9000 (estimated value)

Exercise 3 (d)

1. Add using the expanded form :

Ans.

Th	H	T	O
1	1	1	
4	8	2	6
+ 2	7	9	5
7	6	2	1

Expanded form

4000 + 800 + 20 + 6
+ 2000 + 700 + 90 + 5
6000 + 1500 + 110 + 11

Th	H	T	O
6	0	0	0
1	5	0	0
	1	1	0
+		1	1
7	6	2	1

2. Write in expanded form and add :

Ans. a.

Th	H	T	O
		1	
6	8	2	6
+ 2	1	4	5
8	9	7	1

Expanded form

6000 + 800 + 20 + 6
+ 2000 + 100 + 40 + 5
8000 + 900 + 60 + 11

∴ 6826 + 2145 = 8971

Th	H	T	O
8	0	0	0
	9	0	0
		6	0
+		1	1
8	9	7	1

b.

Th	H	T	O
1	1		
3	6	9	2
+ 2	5	7	1
6	2	6	3

Expanded form

3000 + 600 + 90 + 2
+ 2000 + 500 + 70 + 1
5000 + 1100 + 160 + 3

∴ 3692 + 2571 = 6263

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

c.

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

Expanded form

3000 + 600 + 20 + 0
+ 2000 + 000 + 40 + 5
5000 + 600 + 60 + 5

∴ 3620 + 2045 = 5665

Th	H	T	O
5	0	0	0
	6	0	0
		6	0
+			5
5	6	6	5

Exercise 3 (e)

Solve :

Ans.

1.

		Th	H	T	O
Number of bulbs produced in first day	=		3	2	1
Number of bulbs produced in second day	=	+	2	5	7	1
Total number of bulbs produced in both days	=		5	7	9	2

Answer. So, 5792 bulbs were produced in both days.

2.

		Th	H	T	O
		1	2	1	
Number of Men	=		1	5	9	2
Number of Women	=		1	1	4	2
Number of Children	=	+	5	2	6	8
Total number of people present	=		8	0	0	2

Answer : So, 8002 people are present in the party.

3.

		Th	H	T	O
			1	1	
The number of students in the school in 2012	=		1	4	5	4
The number of students joined the school in the year next	=	+	1	8	9
Total school strength of students in year 2013	=		1	6	4	3

Answer : The school strength was 1643 in year 2013.

4.

		Th	H	T	O
			1		
Virat Kohali scored runs in ODIs	=		1	2	4	3
He scored runs in tests	=	+	1	1	7	4
Total runs scored altogether	=		2	4	1	7

Answer : He scored 2417 runs altogether.

5.

		Th	H	T	O
			1	1		
Number of apple trees	=		1	6	7	0
Number of plum trees	=		2	2	7	0
Number of peach trees	=	+	2	7	2	0
Total number of trees	=		6	6	6	0

Answer : There are total 6660 trees in the orchard.

Fun With Maths

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

Ans.

4379	8144	3060
4369 + 10	7144 + 1000	3050 + 10
4269 + 100	8034 + 110	2960 + 100
3379 + 1000	8044 + 100	2060 + 1000

Higher Order Thinking Skills (HOTS)

Vidhi had left her maths book out and her dog walked all over it with muddy paws! Can you help her to work out what numbers or signs have been hidden by the muddy paw marks?

46	+	65	=	111	95	+	15	=	110
30	+	20	=	50	35	+	65	=	100
60	+	25	=	85	35	+	15	=	50
14	+	8	=	22	62	+	18	=	80

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. b 3. a 4. b

NEP

Use the codes given above and find the sum ; Life Skill and Values

Ans. a.

	Th	H	T	O
READ →		7	4	0 3
+ TERM →		+ 9	4	7 2
	1	6	8	7 5

b.

	Th	H	T	O
		1	1	
PAID →		5	0	8 3
+ TOYS →		+ 9	4	4 8
	1	4	5	3 1

c.

	Th	H	T	O
		1	1	
MATH →		2	0	9 7
+ ENG →		+	4	3 6
		2	5	3 3

d.

	Th	H	T	O
PLAY →		5	1	0 4
+ GAME →		+ 6	0	2 4
	1	1	1	2 8

e.

	Th	H	T	O
		1		
GOOD →		6	4	4 3
+ JOB →		+	9	4 1
		7	3	8 4

f.

	Th	H	T	O
		1	1	
MORE →		2	4	7 4
+ TREE →		+ 9	7	4 4
	1	2	2	1 8

Chapter

4 Subtraction

Let's Recall

Now, answer the following questions.

Ans. a. Rahmanullah Gurbaz

b. Highest runs = 281
Lowest runs = – 231
Difference = 050

H	T	O
2	8	1
– 2	3	1
0	5	0

Hence, the required difference is 50 runs.

c. Rohit Sharma scored = 257
Quinton De Kock scored = – 243
Difference = 014

H	T	O
2	5	7
– 2	4	3
0	1	4

Hence, Rohit Sharma score more runs.

d. Rahmanullah Gurbaz scored = 281
Rohit Sharma scored = – 257
Difference = 24

H	T	O
2	8	1
– 2	5	7
	2	4

Hence, Rohit Sharma scored 29 runs less than Rahmanullah Gurbaz.

Exercise 4 (a)

1. Fill in the blanks :

Ans. a. 358 – 0 = **358**
b. 4569 – 1 = **4568**
c. 2974 – **2974** = 0
d. 7414 – **0** = 7414

2. Find the difference in each of the following :

Ans. a.

Th	H	T	O
9	5	2	9
– 6	2	0	8
3	3	2	1

b.

Th	H	T	O
3	4	4	4
– 1	2	1	2
2	2	3	2

c.

Th	H	T	O
4	6	7	5
– 2	4	2	2
2	2	5	3

d.

Th	H	T	O
6	8	9	8
– 4	2	4	7
2	6	5	1

3. Write the numbers in the column and subtract :

Ans. a. 5346 – 1204 b. 9658 – 7247 c. 6746 – 1623

Th	H	T	O
5	3	4	6
– 1	2	0	4
4	1	4	2

Th	H	T	O
9	6	5	8
– 7	2	4	7
2	4	1	1

Th	H	T	O
6	7	4	6
– 1	6	2	3
5	1	2	3

4. Subtract the following :

Ans. a. 9667 – 8413 b. 6783 – 2352 c. 5368 – 1257

Th	H	T	O
9	6	6	7
– 8	4	1	3
1	2	5	4

Th	H	T	O
6	7	8	3
– 2	3	5	2
4	4	3	1

Th	H	T	O
5	3	6	8
– 1	2	5	7
4	1	1	1

Exercise 4 (b)

1. Find the difference :

Ans. a.

Th	H	T	O
	5	11	10
8	~~6~~	~~2~~	~~0~~
– 2	0	3	3
6	5	8	7

b.

Th	H	T	O
7	11	6	14
~~8~~	~~1~~	~~7~~	~~4~~
– 4	4	2	5
3	7	4	9

c.

Th	H	T	O
6	13	13	13
~~7~~	~~4~~	~~4~~	~~3~~
– 2	6	5	5
4	7	8	8

d.

Th	H	T	O
	6	14	
9	~~7~~	~~4~~	~~5~~
– 5	1	8	2
4	5	6	3

e.

Th	H	T	O
5	15	15	
~~6~~	~~6~~	~~5~~	~~6~~
– 5	8	9	2
0	7	6	4

f.

Th	H	T	O
	7	10	13
9	~~8~~	~~1~~	~~3~~
– 2	3	5	7
7	4	5	6

g.

Th	H	T	O
7	12	9	15
~~8~~	~~3~~	~~0~~	~~5~~
– 4	7	1	8
3	5	8	7

h.

Th	H	T	O
2	11	14	11
~~3~~	~~2~~	~~5~~	~~1~~
– 1	2	9	4
1	9	5	7

i.

2. Subtract the following

Ans. a.

Th	H	T	O
		6	13
8	5	~~7~~	~~3~~
– 3	4	6	6
5	1	0	7

b.

Th	H	T	O
8	17	7	11
~~9~~	~~7~~	~~8~~	~~1~~
– 5	8	7	8
3	9	0	3

c.

Th	H	T	O
	6	11	16
	~~7~~	~~2~~	~~6~~ 3
– 4	2	7	1
2	9	9	2

d.

Th	H	T	O
	7	13	15
6	~~8~~	~~4~~	~~5~~
– 2	1	6	9
4	6	7	6

e.

Th	H	T	O
	3	11	
	~~5~~	~~4~~	~~1~~ ~~5~~
– 2	3	7	4
3	0	4	1

f.

Th	H	T	O
3	12	13	12
~~4~~	~~3~~	~~4~~	~~2~~
– 2	3	4	3
1	9	9	9

Exercise 4 (c)

1. Find the difference in each of the following :

Ans. a.

Th	H	T	O
	5	9	14
1	~~6~~	~~0~~	~~4~~
–		9	5
1	5	0	9

b.

Th	H	T	O
	8	9	10
4	~~9~~	~~0~~	~~0~~
–	5	0	5
4	3	9	5

c.

Th	H	T	O
	6	11	10
6	~~7~~	~~2~~	~~0~~
–	2	7	4
6	4	4	6

d.

Th	H	T	O
8	10	9	10
~~9~~	~~1~~	~~0~~	~~0~~
– 6	2	3	9
2	8	6	1

e.

Th	H	T	O
8	9	9	10
~~9~~	~~0~~	~~0~~	~~0~~
– 7	1	8	6
1	8	1	4

f.

Th	H	T	O
5	9	9	10
~~6~~	~~0~~	~~0~~	~~0~~
– 3	7	9	9
2	2	0	1

g.

Th	H	T	O
6	9	9	10
~~7~~	~~0~~	~~0~~	~~0~~
– 4	9	3	5
2	0	6	5

h.

Th	H	T	O
3	9	9	10
~~4~~	~~0~~	~~0~~	~~0~~
– 3	7	3	9
0	2	6	1

i.

2. Use shortcut to subtract :

Ans. a. 9001 – 2 = 8999
3864 – 2 = – 3862
5137

b. 7500 – 2 = 7498
6459 – 2 = – 6457
1041

c. 4000 – 1 = 3999
2125 – 1 = – 2124
1875

d. 3000 – 1 = 2999
1050 – 1 = – 1049
1950

e. 8002 – 3 = 7999
7927 – 3 = – 7924
75

f. 1000 – 1 = 999
250 – 1 = – 249
750

Exercise 4 (d)

Subtract each of the following and check the answers by addition :

Ans. 1.

H	T	O
8	9	10
~~9~~	~~0~~	~~0~~
– 6	3	1
2	6	9

H	T	O
1	1	
	2	6 9
+	6	3 1
	9	0 0

2.

H	T	O
5	13	
~~6~~	~~3~~	6
– 4	8	5
1	5	1

H	T	O
	1	
	1	5 1
+	4	8 5
	6	3 6

3.

Th	H	T	O
	3	9	10
7	~~4~~	~~0~~	~~0~~
– 3	1	1	6
4	2	8	4

Th	H	T	O
	1	1	
	4	2	8 4
+	3	1	1 6
	7	4	0 0

4.

Th	H	T	O
	4	9	10
6	~~5~~	~~0~~	~~0~~
– 4	3	8	9
2	1	1	1

Th	H	T	O
		1	1
	2	1	1 1
+	4	3	8 9
	6	5	0 0

5.

Th	H	T	O
	2	15	10
4	~~3~~	~~6~~	~~0~~
– 2	1	6	8
2	1	9	2

Th	H	T	O
		1	1
	2	1	9 2
+	2	1	6 8
	4	3	6 0

6.

Th	H	T	O
	7	9	12
6	~~8~~	~~0~~	~~2~~
– 5	4	9	8
1	3	0	4

Th	H	T	O
		1	1
	1	3	0 4
+	5	4	9 8
	6	8	0 2

Exercise 4 (e)

Subtract the following using estimation to the nearest 100 and compare with the actual value :

Ans. 1.

3740	rounds to	3700
–2375	rounds to	–2400
1365		1300

2.

4831	rounds to	4800
–1265	rounds to	–1300
3566		3500

3. 6586 rounds to 6600
−2378 rounds to −2400
4208 4200

4. 8903 rounds to 8900
−5459 rounds to −5500
3444 3400

Exercise 4 (f)

Subtract and do the following sums :

Ans.

1.

		Th	H	T	O
			8	12	
Total number of students	=		1	~~9~~	~~2~~ 6
Number of girls	=	−	1	0	6 5
So, number of boys	=		0	8	6 1

Answer : Hence, there are 861 boys in the school.

2.

		Th	H	T	O
			7	9	10
Total number of pens	=	1	~~8~~	~~0~~	~~0~~
Number of blue pens	=	− 1	4	5	8
So, number of black pens	=		3	4	2

Answer : Hence, there are 342 black pens in the box.

3.

		Th	H	T	O
			9	9	10
Total seats in a conference hall	=	~~1~~	~~0~~	~~0~~	~~0~~
Number of people attended the seminar	=	−	8	2	5
So, number of empty seats in the seminar	=		1	7	5

Answer : Hence, 175 seats were empty.

4.

		Th	H	T	O
			7	14	
Mrs Sharma has money in her account	=		~~8~~	~~4~~	5 0
Money withdraw by her	=	−	5	6	5 0
So, money left in her account	=		2	8	0 0

Answer : Now, there are ₹2800 left in her account.

Higher Order Thinking Skills (HOTS)

An egg seller had 7543 eggs.
He sold 2731 eggs. How many eggs were left with him?

7543 eggs
–2731 eggs
4812 eggs

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. a 3. c 4. b

Fun With Maths

Match the following :

Ans.

a. 100 taken away from 9156	iii. Nine thousand fifty-six
b. 8726 – 4020	i. Four thousand four hundred forty-four
c. 4444 – 0	ii. Five thousand seventy-two
d. 6072 – 1000	iv. Four thousand seven hundred six

NEP Critical Thinking

Ans.

Th	H	T	O
6	2	7	3
–	5	8	3
5	6	9	0

A

Th	H	T	O
1	2	4	7
–	9	2	1
	3	2	6

W

Th	H	T	O
4	8	9	6
– 2	4	9	7
2	3	9	9

T

Th	H	T	O
6	1	1	2
– 4	9	9	9
1	1	1	3

E

Th	H	T	O
3	6	1	1
– 2	1	1	2
1	4	9	9

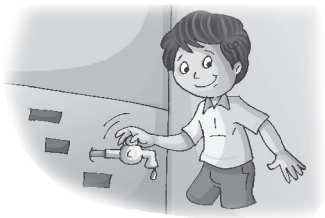
R

Th	H	T	O
2	4	9	8
– 1	6	0	6
	8	9	2

S

Th	H	T	O
2	1	4	8
– 1	4	5	1
	6	9	7

V



892	5690	697	1113	
S	A	V	E	

326	5690	2399	1113	1499
W	A	T	E	R

Chapter

5 Multiplication

Let's Recall

In each group, circle the odd one out. One is done for you.

Ans. a.

3 × 4	(5 × 2)
2 × 6	6 × 2
12 × 1	

b.

1 × 30	5 × 6
6 × 5	10 × 3
(8 × 4)	

c.

4 × 9	6 × 6
12 × 3	(7 × 5)
9 × 4	

d.

4 × 10	5 × 8
(6 × 7)	8 × 5
10 × 4	

Exercise 5 (a)

1. Complete the given table :

Ans.

	Multiplicand	Multiplier	Multiplication	Product
a.	17	5	17 × 5	85
b.	**8**	**5**	8 × 5	**40**
c.	9	4	**9 × 4**	**36**
d.	12	5	**12 × 5**	**60**
e.	**15**	**9**	15 × 9	**135**

2. Complete the grid and find the multiplication facts :

Ans.

8 × 3

x	5	8	11	15	10	16	20	18	13
1	5	8	11	15	10	16	20	18	13
2	10	16	22	30	20	32	40	36	26
3	15	24	33	45	30	48	60	54	39
4	20	32	44	60	40	64	80	72	52
5	25	40	55	75	50	80	100	90	65
6	30	48	66	90	60	96	120	108	78
7	35	56	77	105	70	112	140	126	91
8	40	64	88	120	80	128	160	144	104
9	45	72	99	135	90	144	180	162	117
10	50	80	110	150	100	160	200	180	130

Exercise 5 (b)

1. Multiply the following :

Ans. a.

H	T	O
	7	
	3	8
×		9
3	4	2

∴ 38 × 9 = 342

b.

H	T	O
	3	
	2	5
×		6
1	5	0

∴ 25 × 6 = 150

c.

H	T	O
1	3	3
×		3
3	9	9

∴ 133 × 3 = 399

d.

H	T	O
3	1	0
		2
6	2	0

∴ 310 × 2 = 620

e.

H	T	O
1	2	0
×		4
4	8	0

∴ 120 × 4 = 480

f.

H	T	O
2	0	0
×		5
1	0	0	0

∴ 200 × 5 = 1000

g.

H	T	O
1		
2	9	4
×		2
5	8	8

∴ 294 × 2 = 588

h.

H	T	O
	1	
3	2	6
×		2
6	5	2

∴ 326 × 2 = 652

2. Find the product :

Ans. a.

T	O
2	3
×	2
4	6

∴ 23 × 2 = 46

b.

H	T	O
	4	2
×		4
1	6	8

∴ 42 × 4 = 168

c.

H	T	O
	(1)	
	5	5
×		3
1	6	5

∴ 55 × 3 = 165

d.

H	T	O
	(1)	
	3	4
×		4
1	3	6

∴ 34 × 4 = 136

e.

H	T	O
(1)	(2)	
1	2	5
	×	4
5	0	0

∴ 125 × 4 = 500

f.

H	T	O
	(1)	
2	4	7
	×	2
4	9	4

∴ 247 × 2 = 494

g.

H	T	O
(●)	(●)	
3	1	2
	×	4
1	2	4	8

∴ 312 × 4 = 1248

h.

H	T	O
(1)	(2)	
1	3	4
	×	5
6	7	0

∴ 134 × 5 = 670

Exercise 5 (c)

1. Multiply the following :

Ans. a.

Th	H	T	O
1	2	2	2
		×	4
4	8	8	8

b.

Th	H	T	O
		(2)	
1	0	1	5
		×	5
5	0	7	5

c.

Th	H	T	O
(1)	(3)	(1)	
1	3	8	4
		×	4
5	5	3	6

d.

Th	H	T	O
(1)	(2)	(5)	
1	2	3	9
		×	6
7	4	3	4

e.

Th	H	T	O
(1)			
4	6	1	2
		×	2
9	2	2	4

f.

Th	H	T	O
(1)			
2	5	1	3
		×	3
7	5	3	9

g.

Th	H	T	O
		(1)	
3	0	1	5
		×	2
6	0	3	0

h.

Th	H	T	O
3	3	1	2
		×	3
9	9	3	6

i.

2. Multiply the following and write the answer in the box :

Ans. a.

Th	H	T	O
	3	1	1	4
			×	2
6	2	2	8

∴ 3114 × 2 = 6228

b.

Th	H	T	O
	2	3		
	1	4	6	0
			×	6
8	7	6	0

∴ 1460 × 6 = 8760

c.

Th	H	T	O
	1	1	2	
	2	4	3	5
			×	4
9	7	4	0

∴ 2435 × 4 = 9740

d.

Th	H	T	O
	1		
1	0	4	1
		×	4
4	1	6	4

∴ 1041 × 4 = 4164

e.

Th	H	T	O
2	3	1	4
		×	2
4	6	2	8

∴ 2314 × 2 = 4628

f.

Th	H	T	O
	2	2	
1	9	7	2
		×	3
5	9	1	6

∴ 1972 × 3 = 5916

g.

Th	H	T	O
		1	
4	1	3	5
		×	2
8	2	7	0

∴ 4135 × 2 = 8270

h.

Th	H	T	O
	1	1	
4	1	7	5
		×	2
8	3	5	0

∴ 4175 × 2 = 8350

Exercise 5 (d)

Fill in the blanks :

Ans. 1. 1 × 370 = 370

2. 5914 × 1 = 5914

3. 122 × 1 = 122

4. 92 × 57 = 57 × 92

5. 0 × 1234 = 0

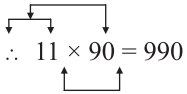
6. 0 × 148 = 0

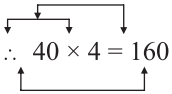
Exercise 5 (e)

Fill in the blanks :

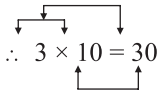
Ans. 1. 11 × 90 = 990

2. 40 × 4 = 160

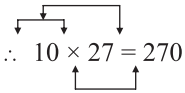




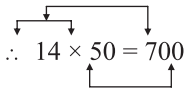
3. $3 \times 10 = 30$



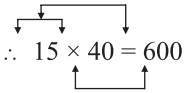
4. $10 \times 27 = 270$



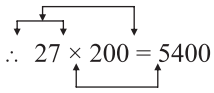
5. $14 \times 50 = 700$



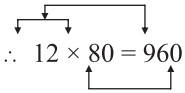
6. $15 \times 40 = 600$



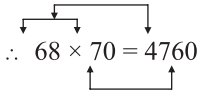
7. $27 \times 200 = 5400$



8. $12 \times 80 = 960$



9. $68 \times 70 = 4760$



Exercise 5 (f)

1. Multiply the following :

Ans. a.

H	T	O	
	3	5	
×	1	3	
1	0	5	← 35 × 3
+ 3	5	0	← 35 × 10
4	5	5	← Sum of two products

Ans. Thus, $35 \times 13 = 455$

b.

Th	H	T	O	
		5	3	
	×	4	9	
	4	7	7	← 53 × 9
+ 2	1	2	0	← 53 × 40
2	5	9	7	← Sum of two products

Ans. Thus, $53 \times 49 = 2597$

c.

Th	H	T	O	
		3	6	
	×	4	2	
		7	2	← 36 × 2
+ 1	4	4	0	← 36 × 40
1	5	1	2	← Sum of two products

Ans. Thus, $36 \times 42 = 1512$

d.

H	T	O	
	2	8	
×	2	5	
1	4	0	← 28 × 5
+ 5	6	0	← 28 × 20
7	0	0	← Sum of two products

Ans. Thus, $28 \times 25 = 700$

e.

Th	H	T	O	
	2	8	9	
	×	3	1	
	2	8	9	← 289 × 1
+	8	6	7	0 ← 289 × 30
	8	9	5	9 ← Sum of two products

Ans. Thus, 289 × 31 = 8959

f.

Th	H	T	O	
	1	5	3	
	×	2	2	
	3	0	6	← 153 × 2
+	3	0	6	0 ← 153 × 20
	3	3	6	6 ← Sum of two products

Ans. Thus, 153 × 22 = 3366

g.

Th	H	T	O	
	3	3	6	
	×	1	4	
	1	3	4	4 ← 336 × 4
+	3	3	6	0 ← 336 × 10
	4	7	0	4 ← Sum of two products

Ans. Thus, 336 × 14 = 4704

h.

Th	H	T	O	
	2	4	2	
	×	2	2	
	4	8	4	← 242 × 2
+	4	8	4	0 ← 242 × 20
	5	3	2	4 ← Sum of two products

Ans. Thus, 242 × 22 = 5324

2. Solve in your notebook :

Ans. a.

Th	H	T	O	
		6	7	
	×	2	5	
	3	3	5	← 67 × 5
+	1	3	4	0 ← 67 × 20
	1	6	7	5 ← Sum of two products

Ans. Thus, 67 × 25 = 1675

b.

Th	H	T	O	
		5	1	
	×	4	8	
	4	0	8	← 51 × 8
+	2	0	4	0 ← 51 × 40
	2	4	4	8 ← Sum of two products

Ans. Thus, 51 × 48 = 2448

c.

Th	H	T	O	
		4	8	
	×	3	8	
	3	8	4	← 48 × 8
+	1	4	4	0 ← 48 × 30
	1	8	2	4 ← Sum of two products

Ans. Thus, 48 × 38 = 1824

d.

H	T	O	
	7	4	
×	1	6	
4	4	4	← 74 × 6
+ 7	4	0	← 74 × 10
1	1	8	4 ← Sum of two products

Ans. Thus, 74 × 16 = 1184

e.

	T	O	
	6	9	
×	5	3	
	2	0	7 ← 69 × 3
+ 3	4	5	0 ← 69 × 50
3	6	5	7 ← Sum of two products

Ans. Thus, 69 × 53 = 3657

f.

	T	O	
	7	2	
×	2	8	
	5	7	6 ← 72 × 8
+ 1	4	4	0 ← 72 × 20
2	0	1	6 ← Sum of two products

Ans. Thus, 72 × 28 = 2016

g.

	Th	H	T	O	
		6	0		
×		4	2		
		1	2	0	← 60 × 2
+	2	4	0	0	← 60 × 40
	2	5	2	0	← Sum of two products

Ans. Thus, 60 × 42 = 2520

h.

	Th	H	T	O	
		6	5		
×		2	7		
		4	5	5	← 65 × 7
+	1	3	0	0	← 65 × 20
	1	7	5	5	← Sum of two products

Ans. Thus, 65 × 27 = 1755

Exercise 5 (g)

1. Solve :

Ans.

1.
Cost of 1 chocolate = ₹48
Cost of 3 chocolates = ₹48 × 3 = ₹144
Answer : Hence, Shivani will pay ₹144 for 3 chocolates.

	4	8
×		3
1	4	4

2.
Cost of 1 story book = ₹295
Cost of 4 story books = ₹295 × 4 = ₹1180
Answer : Hence, The cost of 4 story books is ₹1180.

	2	9	5
×			4
1	1	8	0

3.
One month salary of the peon = ₹2850
3 month salary of the peon = ₹2850 × 3
= ₹8550
Answer : Hence, he earns ₹8550 in 3 months.

2	8	5	0
		×	3
8	5	5	0

4.

Total number of bags of rice = 86
1 bag has quantity of rice = 32 kg
86 bags have quantity of rice = 86 × 32 kg
= 2752 kg

$$\begin{array}{r} 8\ 6 \\ \times\ 3\ 2 \\ \hline 2\ 7\ 5\ 2 \end{array}$$

Answer : Thus, the total weight of rice in the truck is 2752 kg.

Fun With Maths

1. Fill in the blanks :

Ans. 1. 274 + 274 + 274 + 274 = **4** × 274 = **1096**
2. 989 × 1 = **989**
3. 729 × 10 = **7290**
4. 4256 × 17 = 17 × 4256

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. c 3. c 4. c

NEP

Complete the table below : Creative Thinking

Ans.

x	1	10	100	1000
1	**1**	10	**100**	**1000**
5	**5**	**50**	**500**	**5000**
8	8	**80**	**800**	**8000**
11	**11**	**110**	**1100**	**11000**
17	**17**	170	**1700**	**17000**
23	**23**	**230**	**2300**	**23000**
46	**46**	**460**	**4600**	46000
89	**89**	890	**8900**	**89000**
96	**96**	**960**	9600	**96000**

Chapter

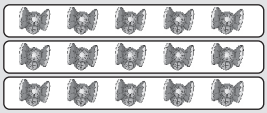
6 Division

Let's Recall

Fill in the boxes.

Ans.

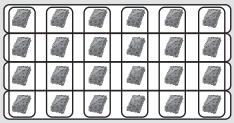
a. 15 hair clips in all.
3 groups of girls.



5 clips in each group.

15 ÷ 3 = 5

b. 24 video games in all.
6 groups of children.



4 video games in each group

24 ÷ 6 = 4

Exercise 6 (a)

1. Find out how many children will get the toy cars.

Ans. a. Each child gets 12 toy car.

24 toy cars in equal groups of 12 = **2** groups

24 ÷ 12 = **2** ; **2** children will get 12 toy cars each.

b. Each child gets 4 toy cars.

24 toy cars in equal groups of 4 = **6** groups

24 ÷ 4 = **6** ; **6** children will get 4 toy cars each.

2. Now, divide the following using the repeated subtraction method.

Ans. a. **16 ÷ 4**

16
− 4 → 1
12
− 4 → 2
8
− 4 → 3
4
− 4 → 4
0

∴ 16 ÷ 4 = 4

b. **25 ÷ 5**

25
− 5 → 1
20
− 5 → 2
15
− 5 → 3
10
− 5 → 4
5
− 5 → 5
0

∴ 25 ÷ 5 = 5

c. **12 ÷ 4**

12
− 4 → 1
8
− 4 → 2
4
− 4 → 3
0

∴ 12 ÷ 4 = 3

Exercise 6 (b)

1. Now, complete the following table. One has been done for you.

Ans.

	Equation	Dividend	Divisor	Quotient
a.	$5\overline{)20}$ (4)	20	5	4
b.	$3\overline{)18}$ (6)	18	3	6
c.	$2\overline{)18}$ (9)	18	2	9
d.	$4\overline{)24}$ (6)	24	4	6
e.	$9\overline{)27}$ (3)	27	9	3

Fill in the blanks :

Ans. a. 0 ÷ 7 = 0 b. 21 ÷ 1 = 21 c. 12 ÷ 12 = 1

d. 15 ÷ 1 = 15 e. 7 ÷ 1 = 7 f. 42 ÷ 42 = 1

g. 0 ÷ 20 = 0 h. 9 ÷ 0 = not possible i. 18 ÷ 18 = 1

Exercise 6 (c)

1. Use each multiplication sentence to write two division facts :

Ans. a. $9 \times 7 = 63$ → $63 \div 7 = 9$, $63 \div 9 = 7$

b. $4 \times 3 = 12$ → $12 \div 3 = 4$, $12 \div 4 = 3$

c. $3 \times 8 = 24$ → $24 \div 3 = 8$, $24 \div 8 = 3$

d. $9 \times 6 = 54$ → $54 \div 6 = 9$, $54 \div 9 = 6$

2. How many division facts can you make with these?

Ans. a. $6 \times 6 = 36$; $36 \div 6 = 6$

b. $5 \times 5 = 25$; $25 \div 5 = 5$

c. $4 \times 4 = 16$; $16 \div 4 = 4$

d. $9 \times 9 = 81$; $81 \div 9 = 9$

Exercise 6 (d)

1. Now, solve the following in your notebook :

Ans.

1. $9\overline{)45}$ → 5; -45; 0
2. $9\overline{)81}$ → 9; -81; 0
3. $8\overline{)64}$ → 8; -64; 0
4. $5\overline{)25}$ → 5; -25; 0
5. $5\overline{)30}$ → 6; -30; 0
6. $7\overline{)35}$ → 5; -35; 0
7. $6\overline{)36}$ → 6; -36; 0
8. $3\overline{)39}$ → 13; -3; 9; -9; 0
9. $4\overline{)60}$ → 15; -4; 20; -20; 0
10. $8\overline{)48}$ → 6; -48; 0

Exercise 6 (e)

Divide the following :

Ans.

1. $3\overline{)639}$ → 213; -6; 03; -3; 09; -9; 0
2. $2\overline{)824}$ → 412; -8; 02; -2; 04; -4; 0
3. $4\overline{)844}$ → 211; -8; 04; -4; 04; -4; 0

Answer : Hence,
Quotient =213,
Remainder = 0

Answer : Hence,
Quotient = 412,
Remainder = 0

Answer : Hence,
Quotient = 211,
Remainder = 0

4.

```
  111
5)555
 -5
  05
  -5
   05
   -5
    0
```

5.

```
  204
2)408
 -4
  00
  -0
   08
   -8
    0
```

6.

```
  211
3)633
 -6
  03
  -3
   03
   -3
    0
```

Answer : Hence,
Quotient = 111,
Remainder = 0

Answer : Hence,
Quotient = 204,
Remainder = 0

Answer : Hence,
Quotient = 211,
Remainder = 0

7.

```
  200
4)800
 -8
  00
  -0
   00
   -0
    0
```

8.

```
  112
4)448
 -4
  04
  -4
   08
   -8
    0
```

Answer : Hence,
Quotient = 200, Remainder = 0

Answer : Hence,
Quotient = 112,
Remainder = 0

Exercise 6 (f)

1. Divide the following and find the quotient and remainder.

Ans. a.

```
  7
8)58
 -56
  2
```

Q = 7
R = 2

b.

```
  11
5)55
 -5
  05
  -5
   0
```

Q = 11
R = 0

c.

```
  6
4)27
 -24
  3
```

Q = 6
R = 3

d.

```
  9
7)69
 -63
  6
```

Q = 9
R = 6

e.
$$\begin{array}{r} 5 \\ 9\overline{)47} \\ -45 \\ \hline 2 \end{array}$$
Q = 5
R = 2

f.
$$\begin{array}{r} 6 \\ 3\overline{)18} \\ -18 \\ \hline 0 \end{array}$$
Q = 6
R = 0

g.
$$\begin{array}{r} 7 \\ 5\overline{)36} \\ -35 \\ \hline 1 \end{array}$$
Q = 7
R = 1

h.
$$\begin{array}{r} 8 \\ 6\overline{)53} \\ -48 \\ \hline 5 \end{array}$$
Q = 8
R = 5

2. Divide :

Ans. a.
$$\begin{array}{r} 19 \\ 3\overline{)58} \\ -3\downarrow \\ \hline 28 \\ -27 \\ \hline 1 \end{array}$$
Answer : Hence, Q = 19, R = 1

b.
$$\begin{array}{r} 10 \\ 7\overline{)72} \\ -70 \\ \hline 2 \end{array}$$
Answer : Hence, Q = 10, R = 2

c.
$$\begin{array}{r} 12 \\ 8\overline{)99} \\ -8\downarrow \\ \hline 19 \\ -16 \\ \hline 3 \end{array}$$
Answer : Hence, Q = 12, R = 3

d.
$$\begin{array}{r} 11 \\ 6\overline{)69} \\ -6\downarrow \\ \hline 09 \\ -6 \\ \hline 3 \end{array}$$
Answer : Hence, Q = 11, R = 3

e.
$$\begin{array}{r} 15 \\ 4\overline{)61} \\ -4\downarrow \\ \hline 21 \\ -20 \\ \hline 1 \end{array}$$
Answer : Hence, Q = 15, R = 1

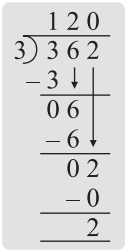
f.
$$\begin{array}{r} 6 \\ 5\overline{)31} \\ -30 \\ \hline 1 \end{array}$$
Answer : Hence, Q = 6, R = 1

g.
$$\begin{array}{r} 5 \\ 9\overline{)52} \\ -45 \\ \hline 07 \end{array}$$
Answer : Hence, Q = 5, R = 7

h.
$$\begin{array}{r} 22 \\ 2\overline{)44} \\ -4\downarrow \\ \hline 04 \\ -4 \\ \hline 0 \end{array}$$
Answer : Hence, Q = 22, R = 0

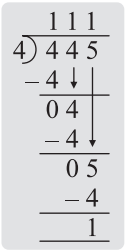
3. Divide and find the quotient and remainder :

Ans. a.



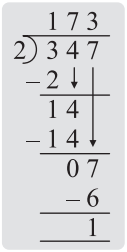
Answer :
Q = 120,
R = 2

b.



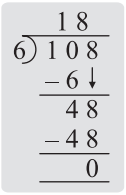
Answer :
Q = 111,
R = 1

c.



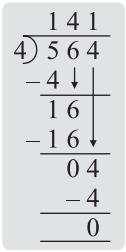
Answer :
Q = 173,
R = 1

d.



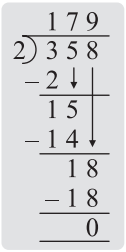
Answer :
Q = 18,
R = 0

e.



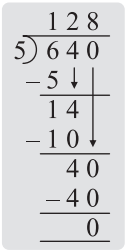
Answer :
Q = 141,
R = 0

f.



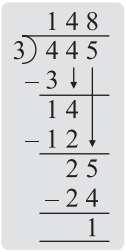
Answer :
Q = 179,
R = 0

g.



Answer :
Q = 128,
R = 0

h.

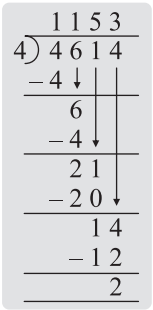


Answer :
Q = 148,
R = 1

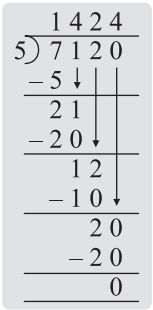
Exercise 6 (g)

Divide and check your answer :

Ans. 1.



2.



Ans. Thus, Q = 1153, R = 2

Check Division :

Q × Divisor + R = Dividend
1153 × 4 + 2 = 4614
Thus, our answer is correct.

Ans. Thus, Q = 1424, R = 0

Check Division :

Q × Divisor + R = Dividend
1424 × 5 + 0 = 7120
Thus, our answer is correct.

3.

```
   1188
7) 8317
  -7
   13
   -7
    61
   -56
     57
    -56
      1
```

4.

```
   1091
3) 3275
  -3
   027
   -27
     05
     -3
      2
```

Ans. Thus, Q = 1188, R = 1

Check Division :

Q × Divisor + R = Dividend
1188 × 7 + 1 = 8317
Thus, our answer is correct.

Ans. Thus, Q = 1091, R = 2

Check Division :

Q × Divisor + R = Dividend
1091 × 3 + 2 = 3275
Thus, our answer is correct.

5.

```
   1818
3) 5454
  -3
   24
   -24
     5
    -3
     24
    -24
      0
```

6.

```
   181
8) 1450
  -8
   65
   -64
     10
     -8
      2
```

Ans. Thus, Q = 1818, R = 0

Ans. Thus, Q = 181, R = 2

Check Division :

Q × Divisor + R = Dividend
1818 × 3 + 0 = 5454
Thus, our answer is correct.

Check Division :

Q × Divisor + R = Dividend
181 × 8 + 2 = 1450
Thus, our answer is correct.

7.

```
     8 5 9
   ________
6 ) 5 1 5 4
  – 4 8
  ________
      3 5
    – 3 0
  ________
        5 4
      – 5 4
  ________
          0
  ________
```

Ans. Thus, Q = 859, R = 0

Check Division :

Q × Divisor + R = Dividend
859 × 6 + 0 = 5154
Thus, our answer is correct.

8.

```
     1 2 4 9
   __________
8 ) 9 9 9 9
  – 8
  __________
    1 9
  – 1 6
  __________
      3 9
    – 3 2
  __________
        7 9
      – 7 2
  __________
          7
  __________
```

Ans. Thus, Q = 1249, R = 7

Check Division :

Q × Divisor + R = Dividend
1249 × 8 + 7 = 9999
Thus, our answer is correct.

Exercise 6 (h)

Find the quotient and remainder :

Ans. 1.

```
        7
    ______
10 ) 7 5
   – 7 0
   ______
       5
   ______
```

∴ Q = 7
R = 5

2.

```
      1 0
    ________
10 ) 1 0 0
   – 1 0
   ________
       0 0
     – 0 0
   ________
         0
   ________
```

∴ Q = 10
R = 0

3.

```
      2 0
    ________
10 ) 2 0 5
   – 2 0
   ________
       0 5
       – 0
   ________
         5
   ________
```

∴ Q = 20
R = 5

4.

```
      6 1
    ________
10 ) 6 1 5
   – 6 0
   ________
       1 5
     – 1 0
   ________
         5
   ________
```

∴ Q = 61
R = 5

5.
$$\begin{array}{r} 6 \\ 10\overline{)\,68} \\ -60 \\ \hline 8 \end{array}$$
$\therefore$ Q = 6, R = 8

6.
$$\begin{array}{r} 19 \\ 10\overline{)\,6540} \\ -60\downarrow \\ \hline 54 \\ -50\downarrow \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$
$\therefore$ Q = 654, R = 0

7.
$$\begin{array}{r} 461 \\ 10\overline{)\,4610} \\ -40\downarrow \\ \hline 61 \\ -60\downarrow \\ \hline 10 \\ -10 \\ \hline 0 \end{array}$$
$\therefore$ Q = 461, R = 0

8.
$$\begin{array}{r} 295 \\ 10\overline{)\,2956} \\ -20\downarrow \\ \hline 95 \\ -90\downarrow \\ \hline 56 \\ -50 \\ \hline 6 \end{array}$$
$\therefore$ Q = 295, R = 0

Exercise 6 (i)

1. Solve the following :

Ans.

1.

Total number of marigold flowers = 270
Number of garlands made = 9
Number of marigold flowers in one garland = 270 ÷ 9
= 30

$$\begin{array}{r} 30 \\ 9\overline{)\,270} \\ -27\downarrow \\ \hline 00 \\ -0 \\ \hline 0 \end{array}$$

Answer : Thus, there are 30 marigold flowers in one garland.

2.

10 buses carry the number of people = 950
1 bus carry the number of people = 950 ÷ 10
= 95

$$\begin{array}{r} 95 \\ 10\overline{)\,950} \\ -90\downarrow \\ \hline 50 \\ -50 \\ \hline 0 \end{array}$$

Answer : Thus, 95 people can travel by each bus.

3.

Total number of apples in a garden = 242
Number of basket in which they have to be packed equally = 2
Number of fruits packed in each basket = 242 ÷ 2
= 121

$$\begin{array}{r} 121 \\ 2\overline{)\,242} \\ -2\downarrow \\ \hline 4 \\ -4\downarrow \\ \hline 2 \\ -2 \\ \hline 0 \end{array}$$

Answer : Hence, 121 fruits should be packed in each basket.

5. Length of a rope = 180 cm
Number of friends in which rope is to be shared = 9
The length of each rope = 180 ÷ 9 = 20
Answer : Hence, the length of each rope is 20 cm.

```
   20
9)180
 -18↓
   00
  -0
   0
```

Fun with Maths

Karan has 19 pencils.

Higher order Thinking Skills (HOTS)

∵ 36 × 2 = 72, She should by 72 chocolates.

Multiple Choice Questions (MCQs) Experimental Learning

Choose the correct option.

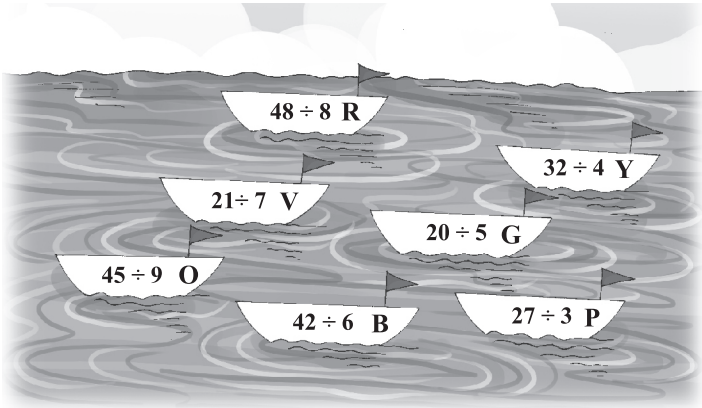
Ans. 1. b 2. c 3. c 4. a

NEP

Colour the question boat to match the colours of the answer rectangle.

Ans.

6	7	8	3	4	5	9



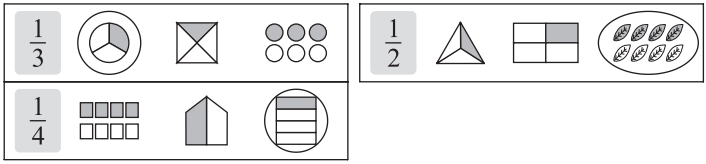
Chapter

7 Fractions

Let's Recall

Circle the correct picture, which shows the fraction :

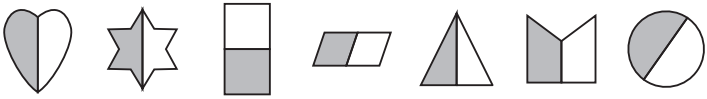
Ans.



Exercise 7 (a)

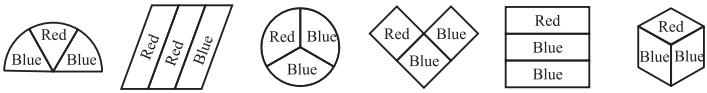
1. Shade or colour one half :

Ans.



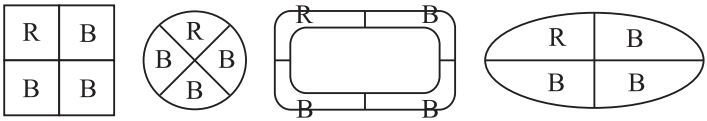
2. Colour to show one third in red and two thirds in blue :

Ans.



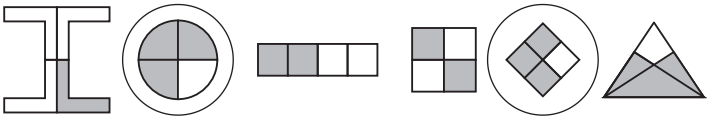
3. Colour to show one fourth in red and three fourths in blue :

Ans.



4. Ring the shapes where $\frac{3}{4}$ is orange :

Ans.



5. Look at the figures and write the fraction represented by the shaded portion. Also write the numerator and denominator of the fraction :

Ans. a.  = $\frac{3}{8}$ Numerator = **3** Denominator = **8**

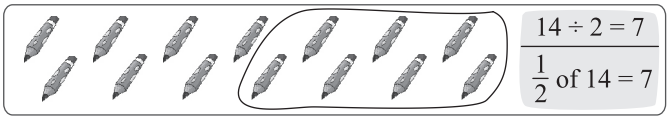
b.  = $\frac{1}{4}$ Numerator = **1** Denominator = **4**

c.  = $\frac{4}{6}$ Numerator = **4** Denominator = **6**

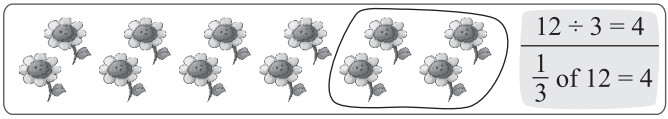
d.  = $\frac{6}{10}$ Numerator = **6** Denominator = **10**

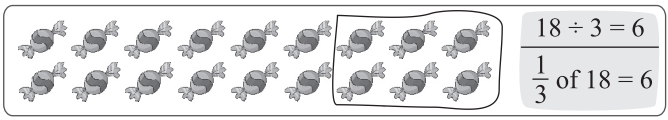
Exercise 7 (b)

1. Circle one half :

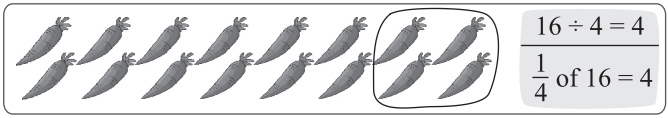
Ans. b. 

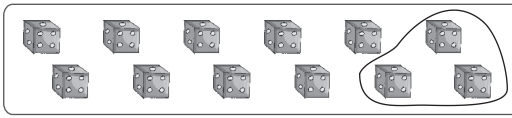
2. Circle one third :

Ans. b. 

c. 

3. Circle one fourth :

Ans. b. 

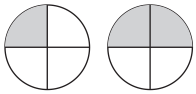
c. 

$12 \div 4 = 3$

$\frac{1}{4}$ of $12 = 3$

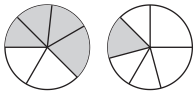
Exercise 7 (c)

1. Compare the following fractions. Use the sign > or <. Now there are no pictures to help but you can do :

Ans. a. 

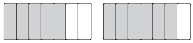
Since $1 < 2$

$\therefore \frac{1}{4} < \frac{2}{4}$

b. 

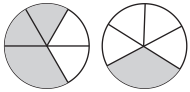
Since $4 > 1$

$\therefore \frac{4}{6} > \frac{1}{6}$

c. 

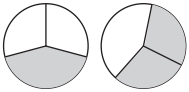
Since $5 < 6$

$\therefore \frac{5}{7} < \frac{6}{7}$

d. 

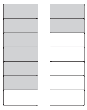
Since $3 > 1$

$\therefore \frac{3}{5} > \frac{1}{5}$

e. 

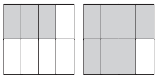
Since $1 < 2$

$\therefore \frac{1}{3} < \frac{2}{3}$

f. 

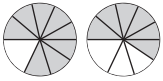
Since $6 > 2$

$\therefore \frac{6}{7} > \frac{2}{7}$

g. 

Since $3 < 7$

$\therefore \frac{3}{8} < \frac{7}{8}$

h. 

Since $8 > 6$

$\therefore \frac{8}{9} > \frac{6}{9}$

2. Arrange the following in ascending order :

Ans. a. $\frac{7}{8}, \frac{2}{8}, \frac{6}{8}, \frac{3}{8}$

Since, $2 < 3 < 6 < 7$

So, $\frac{2}{8} < \frac{3}{8} < \frac{6}{8} < \frac{7}{8}$

b. $\frac{1}{6}, \frac{3}{6}, \frac{5}{6}, \frac{2}{6}$

Since, $1 < 2 < 3 < 5$

So, $\frac{1}{6} < \frac{2}{6} < \frac{3}{6} < \frac{5}{6}$

c. $\frac{2}{5}$, $\frac{4}{5}$, $\frac{3}{5}$, $\frac{1}{5}$ d. $\frac{5}{7}$, $\frac{1}{7}$, $\frac{2}{7}$, $\frac{6}{7}$

Since, $1 < 2 < 3 < 4$ Since, $1 < 2 < 5 < 6$

So, $\frac{1}{5} < \frac{2}{5} < \frac{3}{5} < \frac{4}{5}$ So, $\frac{1}{7} < \frac{2}{7} < \frac{5}{7} < \frac{6}{7}$

3. Arrange the following in descending order :

Ans. a. $\frac{1}{9}$, $\frac{7}{9}$, $\frac{3}{9}$, $\frac{5}{9}$ b. $\frac{1}{5}$, $\frac{4}{5}$, $\frac{2}{5}$, $\frac{3}{5}$

Since, $7 > 5 > 3 > 1$ Since, $4 > 3 > 2 > 1$

So, $\frac{7}{9} > \frac{5}{9} > \frac{3}{9} > \frac{1}{9}$ So, $\frac{4}{5} > \frac{3}{5} > \frac{2}{5} > 1$

c. $\frac{1}{10}$, $\frac{9}{10}$, $\frac{2}{10}$, $\frac{5}{10}$ d. $\frac{2}{7}$, $\frac{5}{7}$, $\frac{1}{7}$, $\frac{4}{7}$

Since, $9 > 5 > 2 > 1$ Since, $5 > 4 > 2 > 1$

So, $\frac{9}{10} > \frac{5}{10} > \frac{2}{10} > \frac{1}{10}$ So, $\frac{5}{7} > \frac{4}{7} > \frac{2}{7} > \frac{1}{7}$

Higher order Thinking Skills (HOTS)

In the word 'Environment' what fraction of the alphabets are :

Ans. 1. $\frac{4}{11}$ 2. $\frac{7}{11}$ 3. 0 4. $\frac{2}{11}$

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. a 3. d 4. c

Fun with Maths

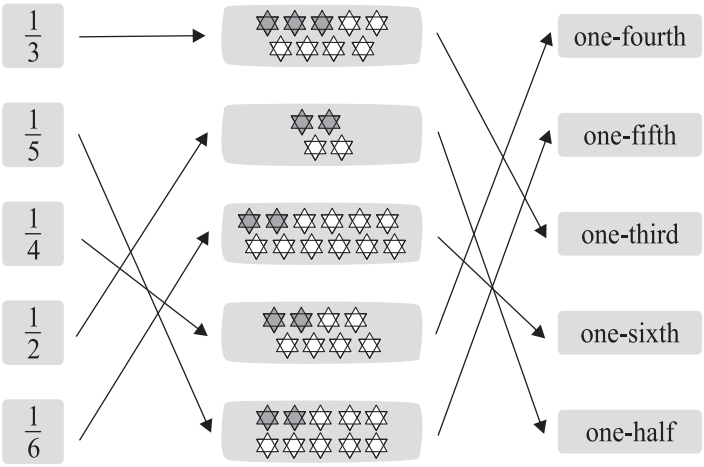
Which fraction do the following collections represent. Tick (✓) the correct answer.

Ans. a. ii. $\frac{1}{3}$ of 15 b. iii. $\frac{1}{4}$ of 20

NEP

Match the following. One has been done for you.

Ans.



Chapter

8 Geometry

Let's Recall

Look at the picture given above. Tick (✓) the correct box according to the shape of the objects :

Ans.

Object	Sphere	Cuboid	Cube
			✓
		✓	
	✓		

Object	Cylinder	Cone	Rectangle
	✓		
		✓	
			✓

Exercise 8 (a)

1. Fill in the blanks :

Ans. a. A line segment has **a definite** length.

b. A point shows a definite **position**.
c. A line MN is represented by **MN**.
d. A ray has **one** end point.
e. A line segment has **two** end points.

2. Measure each of the following line segments.

Ans. Do it yourself.

3. Measure the length of each line segment of the shape.

Ans. Do it yourself.

4. Do the following ;

Ans. a. P — 8 cm — Q b. M — 7 cm — N c. P — 6 cm — O — Q, A above O, B below O

Exercise 8 (b)

1. Fill in the blanks :

Ans. a. A triangle has **three** sides and **three** corners.
b. Opposite sides of a rectangle are **equal**.
c. A square has **four** sides and **four** corners.
d. A circle has **no** corner.
e. All the sides of a square are **equal**.

2. Name the shape that you will get if you trace the outline of :

Ans. a.  Rectangle b.  Triangle

c.  Circle d.  Square

Exercise 8 (c)

1. Tick (✓) the correct word in each sentence.

Ans. a. The football has a (plane/**curved**✓) surface.
b. The watermelon has a (plane/**curved**✓) surface.
c. The top of your teacher's table has a (**plane**✓/curved) surface.
d. The ball of wool has a (plane/**curved**✓) surface.

2. Write True or False :

Ans. a. False b. True c. True d. True
e. False f. True g. True

3. Complete the table :

Ans.

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

Higher order Thinking Skills (HOTS)

Ans. Do it yourself.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. c 3. c 4. b 5. a

NEP

Integrated Approach

Count the shapes and fill in the blanks :

Ans.

There are 4 squares and 4 rectangles.

There are 5 triangles.

There are 4 rectangles.

Chapter

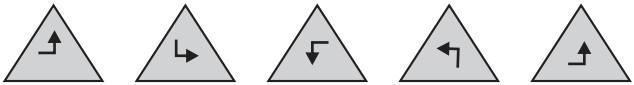
9 Patterns

Let's Recall

Observe the figures and complete the pattern.

Ans. a.

b.



Exercise 9 (a)

1. Look for the patterns and complete the series for each of the following :

Ans. a.

b.

c.

2. Look for the patterns and write next 3 terms.

Ans. a. 10, 20, 30, 40, **50**, **60**, **70**

b. 5, 10, 20, 35, **55**, **80**, **110**

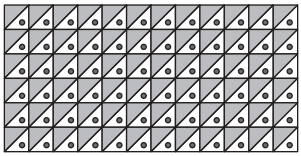
c. 1, 4, 7, 10, 13, **16**, **19**, **22**

d. 10, 18, 34, 66, **130**, **258**, **514**

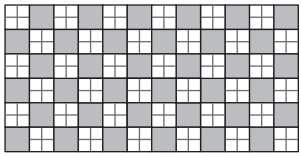
Exercise 9 (b)

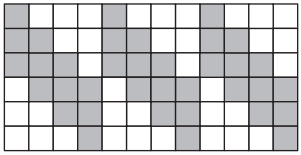
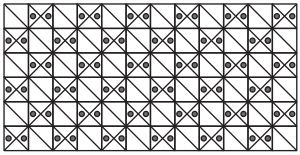
1. Colour and complete the title pattern :

Ans. a.



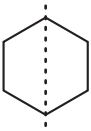
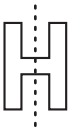
b.

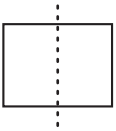
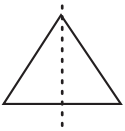
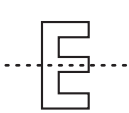


c.  d. 

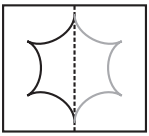
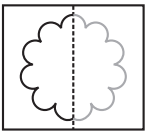
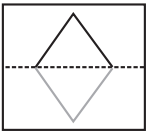
Exercise 9 (c)

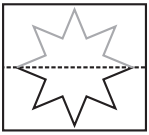
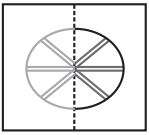
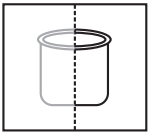
1. Draw lines to divide the following figures into two similar halves.

Ans. a.  b.  c.  d. 

e.  f.  g.  h. 

2. Complete the following figures so that they are symmetrical about the line of symmetry.

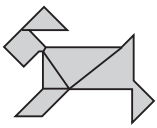
Ans. a.  b.  c. 

d.  e.  f. 

3. Draw liens to show the seven pieces of tangram which have been used to make each of these animals.

Ans. a. 

Dog

b. 

Goat

c. 

Crane

Multiple Choice Questions (MCQs)

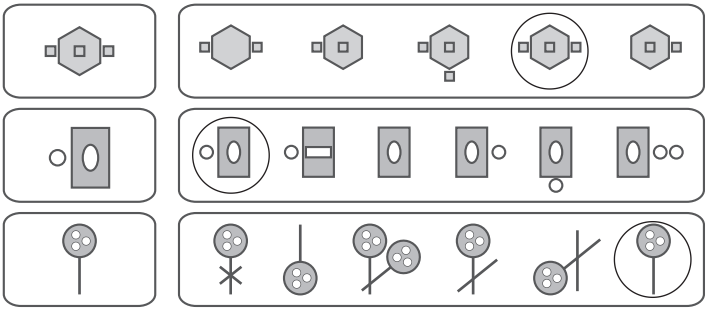
Choose the correct option.

Ans. 1. a 2. b 3. a

NEP Life Skill and Values

Circle the shape on the right hand side which is similar to the shape on the left hand side. One has been done for you.

Ans.



Chapter

10 Measurement

Let's Recall

Would you use cm, m, mL, L, g or kg to measure these?
First decide whether you need to measure length, mass, or capacity and then write the unit accordingly.

Ans.

a. 

Quantity of tea in a cup **mL**

b. 

Weight of a television set **Kg**

c. 

Length of the painting **cm**

d. 

Weight of newspaper **g**

e. 

Length of pencil **cm**

f. 

Quantity of water in the jug **L**

Exercise 10 (a)

1. Change into cm :

Ans. a. $\because$ 1 m = 100 cm

$\therefore$ 4 m = 4 × 100 cm = 400 cm

Answer : 4 m = 400 cm

b. $\because$ 1 m = 100 cm

$\therefore$ 12 m = 12 × 100 cm = 1200 cm

Answer : 12 m = 1200 cm

c. $\because$ 1 m = 100 cm

$\therefore$ 9 m = 9 × 100 cm = 900 cm

9 m 99 cm = 9 m + 99 cm

= 900 cm + 99 cm = 999 cm

Answer : 9 m 99 cm = 999 cm

d. $\because$ 1 m = 100 cm

$\therefore$ 42 m = 42 × 100 cm = 4200 cm

Answer : 42 m = 4200 cm

2. Change into m :

Ans. a. $\because$ 1 km = 1000 m

$\therefore$ 5 km = 5 × 1000 m = 5000 m

Answer : 5 km = 5000 m

b. $\because$ 1 km = 1000 m

$\therefore$ 7 km = 7 × 1000 m = 7000 m

Answer : 7 km = 7000 m

c. $\because$ 1 km = 1000 m

$\therefore$ 9 km = 9 × 1000 m = 9000 m

9 km 45 m = 9 km + 45 m = 9000 m + 45 m

= 9045 m

Answer : 9 km 45 m = 9045 m

d. $\because$ 1 km = 1000 m

$\therefore$ 4 km = 4 × 1000 m = 4000 m

4 km 490 m = 4000 m + 490 m = 4490 m

Answer : 4 km 490 = 4490 m

3. Change into m and cm :

Ans. a. 736 cm = 700 cm + 36 cm ($\because$ 100 cm = 1 m)

= 7 m + 36 cm

= 7 m 36 cm

Answer : 736 cm = 7 m 36 cm

b. 438 cm = 400 cm + 38 cm (∵ 100 cm = 1 m)
= 4 m + 38 cm
= 4 m 38 cm

Answer : 438 cm = 4 m 38 cm

c. 3856 cm = 3800 m + 56 cm (∵ 100 cm = 1 m)
= 38 m + 56 cm
= 38 m 56 cm

Answer : 3856 cm = 38 m 56 cm

d. 893 cm = 800 cm + 93 cm (∵ 100 cm = 1 m)
= 8 m + 93 cm
= 8 m 93 cm

Answer : 893 cm = 8 m 93 cm

4. Change into km and m :

Ans. a. 2815 m = 2000 m + 815 m (∵ 1000 m = 1 km)
= 2 km + 815 m
= 2 km 815 m

Answer : 2815 m = 2 km 815 m

b. 1230 m = 1000 m + 230 m (∵ 1000 m = 1 km)
= 1 km + 230 m
= 1 km 230 m

Answer : 1230 m = 1 km 230 m

c. 6300 m = 6000 m + 300 m (∵ 1000 m = 1 km)
= 6 km + 300 m
= 6 km 300 m

Answer : 6300 m = 6 km 300 m

d. 8345 m = 8000 m + 345 m (∵ 1000 m = 1 km)
= 8 km + 345 m
= 8 km 345 m

Answer : 8345 m = 8 km 345 m

e. 9987 m = 9000 m + 987 m (∵ 1000 m = 1 km)
= 9 km + 987 m
= 9 km 987 m

Answer : 9987 m = 9 km 987 m

f. 7603 m = 7000 m + 603 m (∵ 1000 m = 1 km)
= 7 km + 603 m
= 7 km 603 m

Answer : 7603 m = 7 km 603 m

Exercise 10 (b)

1. Add :

Ans. a.

	m	cm
	22	17
+	47	52
	69	69

Answer : 69 m 69 cm

b.

	m	cm
	1	
	55	32
+	68	60
	123	92

Answer : 123 m 92 cm

c.

	m	cm
	1	1
	33	48
+	44	73
	78	21

Answer : 78 m 21 cm

d.

	m	cm
	1 1	1
	179	16
+	69	59
	248	75

Answer : 248 m 75 cm

e.

	km	m
	56	317
+	83	470
	139	787

Answer : 139 km 787 m

f.

	km	m
	1	1
	64	250
+	26	570
	90	820

Answer : 90 km 820 m

g.

	km	m
	1	1
	28	239
+	59	741
	87	980

Answer : 87 km 980 m

h.

	km	m
	1 1	1
	78	750
+	24	250
	103	000

Answer : 103 km

2. Add :

Ans. a.

	m	cm
	40	23
+	79	56
	119	79

Answer : 119 m 79 cm

b.

	m	cm
	1 2 1	
	87	60
	204	08
+	18	90
	310	58

Answer : 310 m 58 cm

c.

km	m
1 1	1
14	705
+ 9	645
24	350

Answer : 24 km 350 m

d.

km	m
1 1	
128	000
48	190
+ 57	403
233	593

Answer : 233 km 593 m

3. Subtract :

Ans. a.

m	cm
38	38
– 16	20
22	18

Answer : 22 m 18 cm

b.

m	cm
84	72
– 52	51
32	21

Answer : 32 m 21 cm

c.

km	m
6 18	2 14 10
78	350
– 59	275
19	075

Answer : 19 km 75 m

d.

km	m
93	300
– 62	100
31	200

Answer : 31 km 200 m

4. Subtract :

Ans. a.

m	cm
2 12	14 10
33	50
– 17	69
15	81

Answer : 15 m 81 cm

b.

m	cm
4 11	15 11
352	61
– 27	73
324	88

Answer : 324 m 88 cm

c.

km	m
6 14	10 9 10
175	100
– 27	135
147	965

Answer : 147 km 965 m

d.

km	m
7 9	14 12 12
80	532
– 17	636
62	896

Answer : 62 km 896 m

Exercise 10 (c)

1. Change into grams.

Ans. a. ∵ 1 kg = 1000 g

∴ 4 kg = 4 × 1000 g = 4000 g

Answer : 4 kg = 4000 g

b. ∵ 1 kg = 1000 g

∴ 5 kg = 5 × 1000 g = 5000 g

Answer : 5 kg = 5000 g

c. ∵ 1 kg = 1000 g

∴ 8 kg = 8 × 1000 g = 8000 g

∴ 8 kg 295 g = 8000 g + 295 g = 8295 g

Answer : 8 kg 295 g = 8295 g

d. ∵ 1 kg = 1000 g

∴ 3 kg = 3 × 1000 g = 3000 g

∴ 3 kg 25 g = 3000 g + 25 g = 3025 g

Answer : 3 kg 25 g = 3025 g

2. Change into kilogram and grams :

Ans. a. 7676 g = 7000 g + 676 g

= 7 kg + 676 g (∵ 1000 g = 1 kg)

= 7 kg 676 g

Answer : 7676 g = 7 kg 676 g

b. 1006 g = 1000 g + 6 g

= 1 kg + 6 g (∵ 1000 g = 1 kg)

= 1 kg 6 g

Answer : 1006 g = 1 kg 6 g

c. 5042 g = 5000 g + 42 g

= 5 kg + 42 g (∵ 1000 g = 1 kg)

= 5 kg 42 g

Answer : 5042 g = 5 kg 42 g

d. 8490 g = 8000 g + 490 g

= 8 kg + 490 g (∵ 1000 g = 1 kg)

= 8 kg 490 g

Answer : 8490 g = 8 kg 490 g

Exercise 10 (d)

1. Add :

Ans. a.

kg	g
1	1
42	760
+ 26	396
69	156

Answer : 69 kg 156 g

b.

kg	g
	1 1
30	345
+ 42	89
72	434

Answer : 72 kg 434 g

c.

kg	g
1	1
58	009
+ 34	376
92	385

Answer : 92 kg 385 g

d.

kg	g
1 1	2 2
43	666
96	278
+ 86	086
226	030

Answer : 226 kg 30 g

2. Add :

Ans. a.

kg	g
1	1 1
84	585
+ 26	365
110	950

Answer : 110 kg 950 g

b.

kg	g
1 1	1 1
41	689
+ 275	588
317	277

Answer : 317 kg 277 g

c.

kg	g
2 1	2 1
69	293
29	368
+ 18	645
117	306

Answer : 117 kg 306 g

d.

kg	g
1 1 1	1 1
59	486
224	257
+ 330	330
614	073

Answer : 614 kg 73 g

e.

kg	g
1 1	1 2
43	167
27	459
+ 10	505
81	131

Answer : 81 kg 131 g

3. Subtract :

Ans. a.

	kg	g
	6 15	12 13 11
	~~76~~	~~341~~
–	28	768
	47	573

Answer : 47 kg 573 g

b.

	kg	g
	7 11	10 10
	~~82~~	~~108~~
–	47	798
	34	310

Answer : 34 kg 310 g

c.

	kg	g
	4 12	11 10 14
	~~53~~	~~214~~
–	17	865
	35	349

Answer : 35 kg 349 g

d.

	kg	g
	5 9	11 13 11
	~~60~~	~~241~~
–	29	779
	30	462

Answer : 30 kg 462 g

4. Subtract :

Ans. a.

	kg	g
	6 10	11 11 13
	~~71~~	~~223~~
–	49	985
	21	238

Answer : 21 kg 238 g

b.

	kg	g
	8 13	14 9 10
	~~94~~	~~500~~
–	76	729
	17	771

Answer :17 kg 771 g

c.

	kg	g
	5 9	9 9 17
	~~260~~	~~007~~
–	142	128
	117	879

Answer : 18 kg 678 g

d.

	kg	g
	3 15	9 16 14
	~~46~~	~~074~~
–	27	396
	18	678

Answer :117 kg 879 g

Exercise 10 (e)

1. Change into mL :

Ans. a. 3L = 3 × 1000 mL (∵ 1 L = 1000 mL)

= 3000 mL

Answer : 3 L = 3000 mL

b. 9 L = 9 × 1000 mL (∵ 1 L = 1000 mL)
= 9000 mL

Answer : 9 L = 9000 mL

c. 4 L 750 mL = 4 × 1000 mL+ 750 mL
= 4000 mL + 750 mL (∵ 1 L = 1000 mL)
= 4750 mL

Answer : 4 L 750 mL = 4750 mL

d. 6 L 265 mL = 6 × 1000 mL + 265 mL
= 6000 mL + 265 mL (∵ 1 L = 1000 mL)
= 6265 mL

Answer : 6 L 265 mL = 6265 mL

e. 8 L 750 mL = 8 × 1000 mL + 750 mL
= 8000 mL + 750 mL (∵ 1 L = 1000 mL)
= 8750 mL

Answer : 8 L 750 mL = 8750 mL

f. 4 L 404 mL = 4 × 1000 mL + 404 mL
= 4000 mL + 404 mL (∵ 1 L = 1000 mL)
= 4404 mL

Answer : 4 L 404 mL = 4404 mL

2. Change into L and mL :

Ans. a. 7878 mL = 7000 mL + 878 mL
= 7 L + 878 mL (∵ 1000 mL = 1 L)
= 7 L 878 mL

Answer : 7878 mL = 7 L 878 mL

b. 4338 mL = 4000 mL + 338 mL
= 4 L + 338 mL (∵ 1000 mL = 1 L)
= 4 L 338 mL

Answer : 4338 mL = 4 L 338 mL

c. 3540 mL = 3000 mL + 540 mL
= 3 L + 540 mL (∵ 1000 mL = 1 L)
= 3 L 540 mL

Answer : 3540 mL = 3 L 540 mL

d. 6556 mL = 6000 mL + 556 mL
= 6 L + 556 mL (∵ 1000 mL = 1 L)
= 6 L 556 mL

Answer : 6556 mL = 6 L 556 mL

e. 1005 mL = 1000 mL + 5 mL
= 1 L + 5 mL ($\because$ 1000 mL = 1 L)
= 1 L 5 m L

Answer : 1005 mL = 1 L 5 mL

f. 3477 mL = 3000 mL + 477 mL
= 3 L + 477 mL ($\because$ 1000 mL = 1 L)
= 3 L 477 mL

Answer : 3477 mL = 3 L 477 mL

Exercise 10 (f)

1. Add :

Ans. a.

	L	mL
	1 1	1 1
	49	969
+	62	043
	112	012

b.

	L	mL
	1	1
	58	193
+	62	650
	120	843

c.

	L	mL
	1	1
	23	288
+	78	070
	101	358

d.

	Lm	mL
	1 1	1 1
	262	475
	18	325
+	345	85
	625	885

2. Add :

Ans. a.

	L	mL
	1	1
	37	348
+	28	290
	65	638

Answer : 65 L 638 mL

b.

	L	mL
		1 1
	50	594
+	246	047
	296	641

Answer : 296 L 641 mL

c.

	L	mL
	1	1 1
	65	465
+	59	278
	124	743

Answer : 124 L 743 mL

d.

	L	mL
	1	1 1
	729	678
+	137	298
	866	976

Answer : 866 L 976 mL

3. Subtract :

Ans. a.

	L	mL
	8 18	2 16 14
	~~98~~	~~374~~
−	29	296
	69	078

b.

	L	mL
	5 9	13 12 11
	~~60~~	~~431~~
−	39	574
	20	857

c.

	L	mL
	6 11	12 7 10
	~~72~~	~~280~~
−	18	756
	53	524

d.

	L	mL
	4 13	11 8 13
	~~54~~	~~193~~
−	29	785
	24	408

4. Subtract :

Ans. a.

	L	mL
	2 11	9 9 15
	~~32~~	~~005~~
−	16	798
	15	207

Answer : 15 L 207 mL

b.

	L	mL
	3 15	9 12 14
	~~46~~	~~034~~
−	28	798
	17	236

Answer : 17 L 236 mL

c.

	L	mL
	8 12	11 12 12
	~~193~~	~~232~~
−	78	986
	114	246

Answer : 114 L 246 mL

d.

	L	mL
	2 13	9 9 16
	~~34~~	~~006~~
−	18	757
	15	249

Answer : 15 L 249 mL

Exercise 10 (g)

Solve :

Ans.

1.

		m	cm
		1	1
Length of first ribbon	=	6	75
Length of second ribbon	=	+ 4	25
Total length of both the ribbons	=	11	00

Answer : Total length of the two ribbons are 11m.

2.

		kg	g
Total quantity of laddoos	=	2	500
Laddoos distributed to friends	=	– 1	200
Quantity of laddoos left	=	1	300

Answer : 1 kg 300 g laddoos left with him.

3.

		L	mL
		1 1	1
Container I Contains oil	=	16	350
Container II Contains oil	=	+ 16	875
Total quantity of oil	=	33	225

Answer : Total quantity of oil in both the containers are 33 L 225 mL.

4.

		kg	g
Quantity of potatoes	=	5	500
Quantity of tomatoes	=	+ 1	225
Total weight of vegetables	=	6	725

Answer : Total weight of vegetables is 6 kg 725 g.

5.

		m	cm
		4 9 9	9 10
Total length of thread	=	500	00
Tailor used out of it	=	– 242	05
Thread left	=	257	95

Answer : 257 m 95 cm thread left with him.

6.

		L	mL
		1 13	14 10
Kavita filled petrol in her car	=	24	500
She used out of it during the day	=	– 15	780
Petrol left in the car	=	8	720

Answer : Hence, petrol left in her car is 8 L 720 mL.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. a 3. b 4. a

Fun with Maths

Ans. Do it yourself.

NEP

Communication

Riya, Avinash, Niharika and Rahul brought juice to school for the class party.


Rahu


Riya


Avinash


Niharika

Chapter 11 Money

Let's Recall

Tick (✓) the correct answer :

a. ₹ 3.05 = 305 p ✓ or ☐ 35 p

b. 5075 p = ₹ 5.75 ☐ or ✓ ₹ 50.75

c. 5 coins of ₹ 10 = ₹ 510 ☐ or ✓ ₹ 50

d. five ₹ 200 notes = ₹ 1000 ✓ or ☐ ₹ 5200

Exercise 11 (a)

1. Change rupees and paise to paise.

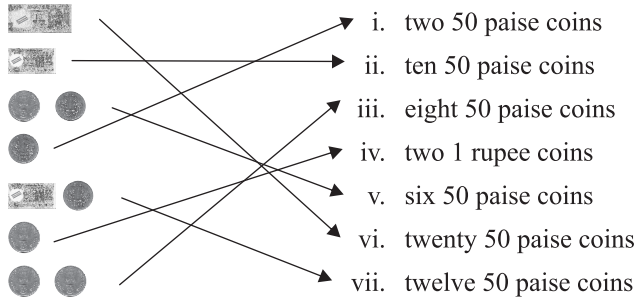
Ans. a. 8 × 100p + 75p = (800 + 75)p = 875p
b. 4 × 100p + 50p = (400 + 50)p = 450p
c. 7 × 100p + 50p = (700 + 50)p = 750p
d. 6 × 100p + 50p = (600 + 50)p = 650p
e. 5 × 100p + 75p = (500 + 75)p = 575p
f. 8 × 100p + 25p = (800 + 25)p = 825p
g. 19 × 100p + 25p = (1900 + 25)p = 1925p
h. 17 × 100p + 75p = (1700 + 75)p = 1775p

2. Change paise to rupees.

Ans. a. ₹ 3.10 b. ₹ 2.75 c. ₹ 4.28
d. ₹ 1.20 e. ₹ 2.20 f. ₹ 4.50
g. ₹ 9.50 h. ₹ 3.20

3. Match the following by drawing lines. One has been done for you.

Ans.



Exercise 11 (b)

1. Add the following :

Ans. a.

₹	P
1	
22	25
+ 20	25
42	50

Ans : ₹42.50

b.

₹	P
1	
75	25
+ 13	25
88	50

Ans : ₹88.50

c.

₹	P
43	75
+ 23	00
66	75

Ans : ₹66.75

d.

₹	P
1	
55	75
+ 26	00
81	75

Ans : ₹81.75

e.

₹	P
25	00
+43	50
68	50

f.

₹	P
65	20
+11	50
76	70

g.

₹	P
11	75
+20	00
31	75

h.

₹	P
1	
27	25
+14	10
41	35

Ans : ₹68.50 **Ans :** ₹76.70 **Ans :** ₹31.75 **Ans :** ₹41.35

2. Add the amounts :

Ans. a.

₹	P
2 1 2	1
95	50
75	75
+195	85
367	10

Answer : ₹367.10

b.

₹	P
1 2 1	1
36	45
428	75
+337	28
802	48

Answer : ₹802.48

c.

₹	P
1 1	1
26	45
27	65
+110	75
164	85

Answer : ₹164.85

d.

₹	P
1 1	
217	50
105	10
+175	75
498	35

Answer : ₹498.30

3. Subtract the following :

Ans. a.

₹	P
4	10
~~65~~	~~00~~
−12	50
52	50

b.

₹	P
6 15	10
~~76~~	~~00~~
−66	50
9	50

c.

₹	P
92	50
−40	00
52	50

d.

₹	P
22	50
−10	00
12	50

4. Subtract the following :

Ans. a.

₹	P
6 9	11 10
~~570~~	~~20~~
−232	55
337	65

Answer : ₹ 337.65

b.

₹	P
11 9	9 10
~~120~~	~~00~~
− 96	65
23	35

Answer : ₹ 23.35

c.

₹	P
1 11 9	16
~~220~~	~~65~~
−183	75
36	90

Answer : ₹ 36.90

d.

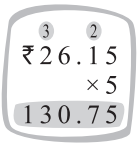
₹	P
2 9 10	
~~300~~	75
−244	44
56	31

Answer : ₹ 56.31

Exercise 11 (c)

1. Find the product :

Ans. a.

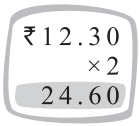


Ans : ₹ 130.75

b.

Ans : ₹ 55.44

c.



Ans : ₹ 24.60

d.

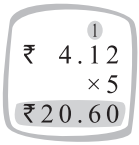
Ans : ₹ 279.90

2. Multiply and express the answer in rupees.

Ans. a.

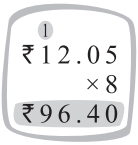
Ans : ₹ 0.96

b.



Ans : ₹ 20.60

c.



Ans : ₹ 96.40

d.

Ans : ₹ 6.12

e.

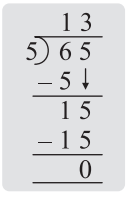
Ans : ₹ 1.74

f.

Ans : ₹ 441.45

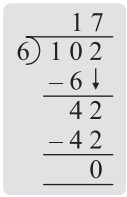
3. Divide the following :

Ans. a.



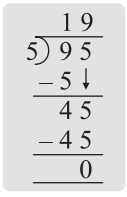
Ans. ₹13

b.



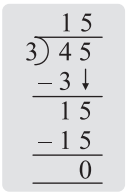
Ans. ₹17

c.



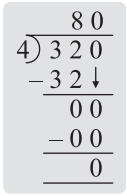
Ans. ₹19

d.



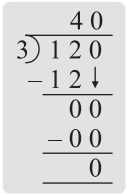
Ans. ₹15

e.



Ans. ₹80

f.



Ans. ₹40

Exercise 11 (d)

Now, do the following :

Ans.

1.

Ross spent money on a cellotape = ₹16.00
Money spent on picture books = + ₹36.70
Total money spent = ₹52.70

Answer : He spent total ₹52.70 in all.

2.

Cost of 1 bread sandwiches = ₹14.50
Cost of 2 bread sandwiches = ₹14.50
= ₹29.00

Answer : So, Vidhi pays ₹29 for two Sandwiches.

3.

Anju had money = ₹65.20
She bought a story book for = – ₹32.10
Money left with Anju = ₹33.10

Answer : Hence, ₹33.10 is left with Anju.

4.

Jimy had money = ₹ 40
Cost of 1 eraser = ₹ 2
So, number of erasers = 40 ÷ 2 = 20

Answer : Hence, Jimy can buy 20 erasers for ₹40.

5.

Cost of 8 kg of milk = ₹185.20
Cost of 1 kg of milk = ₹185.20 ÷ 8
= **₹23.15**

Answer : Hence, The cost of 1 kg of milk is ₹23.15.

Exercise 11 (e)

1. Gargi went to a toy shop. She bought 2 cars for ₹15.00 each, 3 pencil boxes for ₹10.50 each, 1 doll for ₹55.00, 3 balls for ₹3.00 each. Prepare a bill for Gargi items.

Ans.

S. No.	Item	Rate per item	₹	p
1	2 cars	15.00	30	00
2	3 pencil boxes	10.50	31	50
3	1 doll	55.00	55	00
4	3 balls	3.00	9	00
		Total	**125**	**50**

Answer : Hence, Gargi has to pay ₹125.50 for bills items.

2. Read the following and solve.

Ans. a.

S. No.	Item	Rate per item	₹	p
1	Vegetables	₹ 45	45	00
2	Fruits	₹ 78.50	78	50
3	1 Juice packet	₹ 56.50	56	50
		Total	180	00

Answer : Hence, ₹180 is the amount of the bill for Mrs Garg.

b.

S. No.	Item	Rate per item	₹	p
1	6 pencils	₹ 5	30	00
2	4 erasers	₹ 3	12	00
3	4 sharpeners	₹ 8	32	00
4	1 colour box	₹ 12.50	12	50
		Total	86	50

From the bill, we can say that pratik spent ₹86.50 on the bill.

Now, Total money pratik had = ₹100.00
Money spent on the bill = –₹ 86.50
Money left with him = 13.50

Answer : Hence, balance left with him is ₹13.50.

Ans.

Mr Romy		Delhi Store		Bill No. 1250	
Bill				Total Price	
S. No.	Item	Quantity	Price	₹	P
1.	Toffees	5	₹ 1 per piece	5	00
2.	Chocolates	3	₹ 8 per piece	24	00
3.	Wafers	1	₹ 13.50	13	50
			Grand Total	**42**	**50**

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c **2.** b **3.** a **4.** c **5.** a

Chapter 12 Time

Let's Recall

Fill in the blanks. Choose from the box. You will have to use some of the words more than once. How long will it take for :

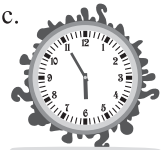
a.	Wheat to grow from seed?	**Months**
b.	You to reach Kolkata from Delhi by train?	**Hours**
c.	Mummy to cook food?	**Minutes**
d.	You hair to grow?	**Days**
e.	You complete your homework?	**Minutes**

Exercise 12 (a)

1. Write the time in two ways.

Ans. a. 
12 : 50
10 minutes to 1

b. 
5 : 20
20 minutes past 5

c. 
6 : 55
5 minutes to 7

d. 
7 : 40
20 minutes to 8

2. Match the columns.

Ans.

a. 10 : 05	i. 20 minutes past 9
b. 5 : 10	ii. 10 minutes past 5
c. 7 : 15	iii. 25 minutes to 9
d. 8 : 35	iv. five minutes past 10
e. 9 : 20	v. quarter past 7

Exercise 12 (b)

Read the clock and write the time in a.m. or p.m.

Ans. 2. Ria have her dinner at **8:00** p.m.
3. Jitu plays at **3:00** p.m.
4. Manan completes his homework at **4 : 00 p.m**.
5. Kabeer takes bath at **7:00 am**.

Exercise 12 (c)

1. Convert into minutes :

Ans. a. ∵ 1 hour = 60 minutes
So, 7 hours = 7 × 60 minutes = 420 minutes
Answer : 7 hours = 420 minutes

b. ∵ 1 hour = 60 minutes
So, 12 hours = 12 × 60 minutes = 720 minutes
Answer : 12 hours = 720 minutes

c. ∵ 1 hour = 60 minutes
So, 18 hours = 18 × 60 minutes = 1080 minutes
Answer : 18 hours = 1080 minutes

d. ∵ 1 hour = 60 minutes
So, 17 hours = 17 × 60 minutes = 1020 minutes
Answer : 17 hours = 1020 minutes

e. $5\frac{1}{2}$ hours = $\frac{11}{2}$ hours (∵ 1 hour = 60 minutes)
So, $5\frac{1}{2}$ hours = $\frac{11}{2}$ × 60 minutes
= 11 × 30 minutes
= 330 minutes
Answer : $5\frac{1}{2}$ hours = 330 minutes

f. 3 hours 45 minutes = 3 hours + 45 minutes
= 3 × 60 minutes + 45 minutes

= 180 minutes + 45 minutes
= 225 minutes

Answer : 3 hours 45 minutes = 225 minutes

g. 7 hours 15 minutes = 7 hours + 15 minutes
= 7 × 60 minutes + 15 minutes
= 420 minutes + 15 minutes
= 435 minutes

Answer : 7 hours 15 minutes = 435 minutes

h. 6 hours 50 minutes = 6 hours + 50 minutes
= 6 × 60 minutes + 50 minutes
= 360 minutes + 50 minutes
= 410 minutes

Answer : 6 hours 50 minutes = 410 minutes

i. 13 hours 25 minutes = 13 hours + 25 minutes
= 13 × 60 minutes + 25 minutes
= 780 minutes + 25 minutes
= 805 minutes

Answer : 13 hours 25 minutes = 805 minutes

2. Convert into hours and minutes.

Ans. a. 120 minutes = $\frac{120}{60}$ hours ($\because$ 1 minute = $\frac{1}{60}$ hour)

= 2 hours

Answer : 120 minutes = 2 hours

b. 220 minutes = $\frac{220}{60}$ hours ($\because$ 1 minute = $\frac{1}{60}$ hour)

= $3\frac{40}{60}$ hours

= 3 hours + $\frac{4}{6}$ hours

= 3 hours + $\frac{4}{6}$ × 60 minutes

= 3 hours + 40 minutes

Answer : 220 minutes = 3 hours 40 minutes

c. 315 minutes $= \frac{315}{60}$ hours $(\because$ 1 minute $= \frac{1}{60}$ hour)

$= 5\frac{15}{60}$ hours

$= 5$ hours $+ \frac{15}{60}$ hours

$= 5$ hours $+ \frac{15}{60} \times 60$ minutes

$= 5$ hours $+ 15$ minutes

$= 5$ hours 15 minutes

Answer : 315 minutes = 5 hours 15 minutes

d. 185 minutes $= \frac{185}{60}$ hours $(\because$ 1 minute $= \frac{1}{60}$ hour)

$= 3\frac{5}{60}$ hours

$= 3$ hours $+ \frac{5}{60}$ hours

$= 3$ hours $+ \frac{5}{60} \times 60$ minutes

$= 3$ hours $+ 5$ minutes

$= 3$ hours 5 minutes

Answer : 185 minutes = 3 hours 5 minutes

e. 540 minutes $= \frac{540}{60}$ hours $(\because$ 1 minute $= \frac{1}{60}$ hour)

$= 9$ hours

Answer : 540 minutes = 9 hours

f. 240 minutes $= \frac{240}{60}$ hours $(\because$ 1 minute $= \frac{1}{60}$ hour)

$= 4$ hours

Answer : 240 minutes = 4 hours

3. Anjali's daily routine is given below. Write the duration of time for each activity.

Ans. a. Duration of time = 1 hour
b. Duration of time = 3 hours
c. Duration of time = 2 hours

Exercise 12 (d)

1. Look at the calendar of present year and answer the following questions :

Ans. a. Roli has holidays from 15th October to 17the October. She has holidays for **three** days. Her school starts on **18 October** which is a **Saturday**.
b. First Sunday in the month of January is on **5th January**.
c. August month has **4** Mondays.
d. Last Sunday in the month of December is on **28th December**.
e. There are **4** Sundays in the month of September.

2. Fill in the blanks :

Ans. a. The January month has **31** days.
b. There are **52** weeks in a year.
c. There are **7** days in a week.
d. The September month has **30** days.
e. There are **365** days in a year.
f. There are **12** months in a year.

Exercise 12 (e)

Tick (✓) the correct estimate of time to do the following activities :

Ans.
1. Brush teeth — **3 minutes**✓/3 hours
2. Play a game of football — $1\frac{1}{2}$ minutes/**$1\frac{1}{2}$ hours**✓
3. Go from 1 class to II class — 1 month/**1 year**✓
4. polish shoes — **10 minutes**✓/10 hours
5. Go from Delhi to Chennai — 2 weeks/**2 days**✓

Fun with Maths

Look at the calendar of this year and write on which days will the following festivals fall?

Festival	Date	Day
Independence day	15-Aug-2025	Friday
Children's day	14-Nov-2025	Friday
Teacher's day	5-Sep-2025	Friday
Republic day	26-Jan-2025	Sunday
Gandhi Jayanti	2-Oct-2025	Thursday

NEP

Write the dates for the following days. Take help from your teacher or parents if you have difficulty.

a. New Year's Day is on  **1st January**

b. Christmas is on **25th December**

c. Independence Day is on  **15th August**

d. Republic Day is on  **25th January**

e. Teacher's Day is on  **5th September**

f. Gandhi Jayanti is on **2nd October**

g. World Earth Day is on  **22nd April**

h. Children's Day is on **14th November**

i. Mother's Day is on  **11th May**

j. Your birthday is on  **Fill yourself.**

Chapter

13 Data Handling

Looking Back

Make the list of the following things.

Ans.

Object	Boys	Girls	Birds	Balloons	Ducks	Squirrel	Flowers
Number	3	2	6	12	3	4	5

Look at the list and answer the following questions.

Ans. a. 3 birds more b. 7 flower less c. 1 boy more

Exercise 13 (a)

1. Students of class III were asked to name their favourite fruit. Use the pictograph to answer the following questions.

Ans. a. Mango is liked by most students.

b. Papaya is liked by least students.

c. ∵ 1  = 2 students

∴  = 3 × 2 = 6 students

Hence, 6 students like guava.

d. Total figures of students = 3 + 5 + 2 + 4 + 6

= 20

∵ 1  = 2 students

∴ Total number of students = 20 × 2

= 40 students

2. In a school, students of class III come to school by using different modes of transport.

Ans. a. (∵ 1  = 3 students)

∴ Total number of students come by bus = 7 × 3

= 21 students

b. (∵ 1  = 3 students)

Number of students come by bicycle = 4 × 3 = 12 students

Number of students come by auto = 3 × 3 = 9 students

Difference between both modes = 12 – 9 = 3 students

∴ 3 more students come by bicycle than auto.

c. Least number of students come by on foot.

d. Most number of students come by bus.

3. Complete the pictograph to represent the given information about favourite food of students of a class :

Ans.

Favourite Food	Number of Students
Burger	
Pizza	
Noodles	
South Indian	
Pav-bhaji	

Here,  = 3 students.

Exercise 13 (b)

1. The following data shows the different types of fish in an aquarium.

Ans.

Fish	No. of fish	Tally Marks
Star fish	6	𝍸 |
Baby shark	4	||||
Gold fish	8	𝍸 |||
Angel fish	12	𝍸 𝍸 ||
Baby fish	5	𝍸
Total	35	

2. Sonal decided to count the number of items in her school bag. She listed the following items :

Ans.

Items in the Bag	Tally Marks	Number
Packet of crayons	|	1
Erasers	||	2
Books	𝍸 |	6
Tiffin	|	1
Pencils	|||	3

3. The following data shows the different flavours of ice cream liked by the students of class III.

Ans.

Ice cream flavour	Tally marks	Number
Vanilla	𝍸 𝍸 | | |	13
Strawberry	𝍸 | |	7
Pineapple	𝍸 𝍸 𝍸 |	16
Chocolate	𝍸 | | | |	9
Pista	𝍸 𝍸 | |	12
	Total	57

Fill in the number column and answer the following questions :

a. Pineapple is liked by most number of students.

b. There are 57 students in all.

c. 12 students like pista.

NEP

Look at the snap and complete the table. Critical Thinking

Ans.

Animal	Number	Tally marks
Elephant	1	|
Deer	5	𝍸
Parrot	4	| | | |
Monkey	3	| | |
Giraffe	2	| |

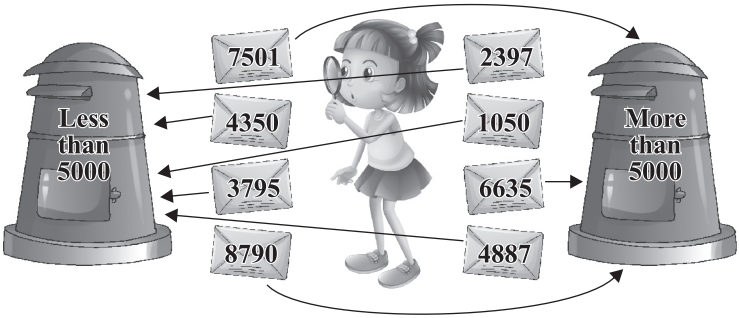
1. c **2.** c

Chapter

1 Number System

Let's Recall

Put the letters in the correct letter boxes :



Exercise 1 (a)

1. Read the abacus and write the number.

Ans. a. TTh Th H T O — 2 3 2 6 9

b. TTh Th H T O — 2 4 7 4 1

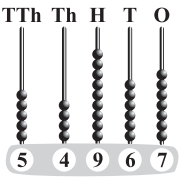
c. TTh Th H T O — 7 3 6 5 4

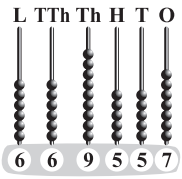
2. Show the following numbers on the abacus :

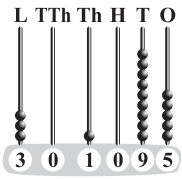
Ans. a. TTh Th H T O — 6 9 3 4 0

b. TTh Th H T O — 3 7 9 5 1

c. L TTh Th H T O — 8 7 7 0 0 9

d. 

e. 

f. 

3. Arrange the numbers in Indian place value chart. Rewrite them in blank spaces with commas at the right places :

Ans.

	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones	
S.No.	**L**	**TTh**	**Th**	**H**	**T**	**O**	**Numbers**
a.		6	9	2	8	7	69,287
b.	5	4	7	1	5	8	5,47,158
c.	7	2	5	1	7	5	7,25,175

4. Write the number names in Indian system :

Ans. a. Twenty-three thousand one hundred twenty-five
b. Eighty-seven thousand eight hundred nineteen
c. Nine lakh twenty-seven thousand four hundred seventy-one

Exercise 1 (b)

1. Group the numbers by putting commas as per the International Number System and write their number names:

Ans. a. 50,249 : Fifty thousand two hundred forty-nine.
b. 23,471 : Twenty three thousand four hundred seventy-one.
c. 543,486 : Five hundred forty-three thousand four hundred eighty-six.
d. 998,916 : Nine hundred ninety-eight thousand nine hundred sixteen.

2. Write numerals for the following number names :

Ans. a. 5,03,102 b. 54,267
c. 9,000,028 d. 2,037,526

3. Arrange the following numbers in International place value chart :

Ans.

Place Value	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Short form	**HTh**	**TTh**	**Th**	**H**	**T**	**O**
34569		3	4	5	6	9
437500	4	3	7	5	0	O
896301	8	9	6	3	0	1
900975	9	0	0	9	7	5

Exercise 1 (c)

1. Find the place value and face value of the coloured digit in the given numbers :

	Numbers	Place Value	Face Value
Ans. a.	5<u>1</u>,417	**50,000**	**5**
b.	56,<u>0</u>46	**000**	**0**
c.	29,<u>7</u>91	**700**	**7**

2. Write the expanded form of the following numbers :

Ans. a. 49,125 = **40000 + 9000 + 100 + 20 + 5**

b. 75,805 = **70000 + 5000 + 800 + 0 + 5**

c. 92,234 = **90000 + 2000 + 200 + 30 + 4**

3. Write the short form of the following numbers :

Ans. a. 45060 b. 65487 c. 32176

4. Write the successor of the following :

Ans. a. 23,046 b. 3,29,668 c. 38,276 d. 34,701

5. Write the predecessor of the following :

Ans. a. 42,097 b. 2,99,999 c. 54,320 d. 6,50,086

Exercise 1 (d)

1. Compare each pair of numbers. Put >, < or = in the ▢ .

Ans. a. 24,371 < 64,392 b. 22,428 < 23,925

c. 89,370 = 89,370 d. 97,478 > 97,378

2. Arrange in ascending order.

Ans. a. 62,728 < 66,128 < 67,185 < 69,571

b. 4,06,219 < 5,31,325 < 6,15,104 < 6,25,041

c. 4,28,312 < 6,28,470 < 7,17,617 < 8,17,518

3. Arrange in descending order.

Ans. a. 93,234 > 92,345 > 90,418 > 90,148

d. 9,51,121 > 9,01,246 > 8,31,415 > 8,13,306

e. 9,71,823 > 9,43,126 > 9,17,338 > 9,17,238

Exercise 1 (e)

1. Write the smallest and greatest number using each of the following digits only once.

Ans. a. 3, 1, 5, 9, 7 Smallest **13,579** Greatest **97,531**

b. 9, 7, 4, 2, 8 Smallest **24,789** Greatest **98,742**

c. 9, 7, 0, 1, 3, 2 Smallest **1,02,379** Greatest **9,73,210**

2. Form the smallest 6-digit number using the digits 1, 3, 0, 5, 7 and 6 only once.

Ans. 1,03,567

3. Round off to the nearest tens.

Ans. a. **6291** The digit at ones place 1 < 5,
So, 6291 is rounded off to 6290.

b. **35876** The digit at ones place 6 > 5,
So, 35876 is rounded off to 35880.

c. **5746** The digit at ones place 6 > 5,
So, 5746 is rounded off to 5750.

d. **4375** The digit at ones place 5 = 5,
So, 4375 is rounded off to 4380.

e. **77475** The digit at ones place 5 = 5,
So, 77475 is rounded off to 77480.

f. **98335** The digit at ones place 5 = 5,
So, 98335 is rounded off to 98340.

4. Round off to the nearest hundreds.

Ans. a. **1185** The digit at tens place 8 > 5,
So, 1185 is rounded off to 1200.

b. **7199** The digit at tens place 9 > 5,
So, 7199 is rounded off to 7200.

c. **6253** The digit at tens place 5 = 5,
So, 6253 is rounded off to 6300.

d. **9830** The digit at tens place 3 < 5,
So, 9830 is rounded off to 9800.

e. **18997** The digit at tens place 9 > 5,
So, 18997 is rounded off to 19000.

f. **8899** The digit at tens place 9 > 5,
So, 8899 is rounded off to 8900.

5. Round off the numbers to the nearest 1000.

Ans. a. **4851** The digit at hundreds place 8 > 5,
So, 4851 is rounded off to 5000.

b. **1086** The digit at hundreds place 0 < 5,
So, 1086 is rounded off to 1000.

c. **9999** The digit at hundreds place 9 > 5,
So, 9999 is rounded off to 10000.

d. **3251** The digit at hundreds place 2 < 5,
So, 3251 is rounded off to 3000.

e. **19731** The digit at hundreds place 7 > 5,
So, 19731 is rounded off to 20000.

f. **20518** The digit at hundreds place 5 = 5,
So, 20518 is rounded off to 21000.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. c 3. b 4. c

NEP Life Skill and Values

Find the area of following states of India in kilometres and then write in words.

Ans. 1. Rajasthan **3,42,239 km^2, Three lakh forty-two thousand two hundred thirty-nine**

2. Punjab **50,362 km^2, Fifty thousand, three hundred sixty-two**

3. Haryana **44,212 km^2, Forty four thousand two hundred twelve.**

4. Uttar Pradesh **2,43,286 km^2, Two lakh forty-three thousand two hundred eighty-six**

5. Madhya Pradesh **3,08,252 km^2, Three lakh eight thousand two hundred fifty-two**

Chapter 2

Roman Numerals

Let's Recall

Complete the crossword with Hindu-Arabic numerals.

Ans. Do it yourself.

Exercise 2 (a)

1. Write the following in Roman numerals.

Ans. a. XXVIII b. XLIX c. LVI
d. CDLXXV e. CCLXXXVIII f. XLVII
g. XXXVII h. CMXCVI i. CXL
j. CCCXCIX

2. Write the following in Hindu-Arabic numerals.

Ans. a. 46 b. 95 c. 29 d. 331 e. 66
f. 61 g. 93 h. 976 i. 83 j. 701

3. Write true (T) or false (F).

Ans. a. F b. T c. T d. F e. T

Higher order Thinking Skills (HOTS)

1. Write >, < or = :

Ans. a. XXI + III > XXIII b. L ÷ V = X
c. 83 > LXXX d. LXII – II < LXIV
e. XLV > LX f. VII × IV < XXX

NEP

Who was the first president of India? Integrated Approach

Ans.

IV	IX	XX-XI	VI-V	II	XII+V	XCII	II×II	XXVII÷III	XV÷XV	XXV	XL-XXXI	L÷L	IX×V	X-IX	LX÷XV
4	9	9	1	2	17	92	4	9	1	25	9	1	45	1	4
D	R	R	A	J	E	N	D	R	A	P	R	A	S	A	D

Decoded message : D R R A J E N D R A P R A S A D

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a **2.** c **3.** b **4.** c

Chapter

3 Addition and Subtraction

Let's Recall

Solve the cross numbers and write the answer. Remember to replace one digit in one square.

Ans.

a. 2	8	8	8			b. 1	9	6	3					
				p. 4						c. 4	d. 1	2	8	
		g. 6		0		m. 2	8	9	8		3			
		8		0							4			
		1		8		j. 4	0	0	l. 9		e. 3	5	8	
h. 8			o. 6		n. 2				4	f. 2				
2			5		7				9	5				
k. 8	4	0	0		8				0	i. 6	4	3	7	

Exercise 3 (a)

1. Add :

Ans. a.
$$\begin{array}{r} 12411 \\ +\ 37362 \\ \hline 49773 \end{array}$$

b.
$$\begin{array}{r} 52557 \\ +\ 22422 \\ \hline 74979 \end{array}$$

c.
$$\begin{array}{r} 63053 \\ +\ 24843 \\ \hline 87896 \end{array}$$

d.
$$\begin{array}{r} 13355 \\ 22421 \\ +\ 41002 \\ \hline 76778 \end{array}$$

2. Find the sums :

Ans. a.
$$\begin{array}{r} 12342 \\ +\ 31206 \\ \hline 43548 \end{array}$$

b.
$$\begin{array}{r} 23201 \\ +\ 36122 2 \\ \hline 38442 3 \end{array}$$

c.
$$\begin{array}{r} 12345 \\ 214312 \\ +\ \ 1022 \\ \hline 227679 \end{array}$$

d.
$$\begin{array}{r} 437105 \\ 141410 \\ +\ \ 20015 \\ \hline 598530 \end{array}$$

e.
$$\begin{array}{r} 103264 \\ 200513 \\ +386101 \\ \hline 689878 \end{array}$$

f.
$$\begin{array}{r} 201234 \\ 312345 \\ +123410 \\ \hline 636989 \end{array}$$

3. Fill in the blanks.

Ans. a.
$$\begin{array}{r} 18475 \\ +\textcircled{4}0\textcircled{4}\textcircled{2}3 \\ \hline 5\textcircled{8}898\textcircled{8} \end{array}$$

b.
$$\begin{array}{r} \textcircled{4}33\textcircled{2}4\textcircled{4} \\ +\ 5\textcircled{5}34\textcircled{3}1 \\ \hline 986675 \end{array}$$

Exercise 3 (b)

1. Add.

Ans. a.

	L	TTh	Th	H	T	O
	2	1	2	3	6	5
+	6	3	9	5	1	5
	8	5	1	8	8	0

b.

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

c.

	L	TTh	Th	H	T	O
		1	6	9	3	3
+		5	4	3	0	6
		7	1	2	3	9

d.

	L	TTh	Th	H	T	O
	5	1	9	4	7	2
	2	1	6	3	2	8
+		1	4	5	1	8
	7	5	0	3	1	8

2. Solve the following :

Ans. a.

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

b.

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

c.

	L	TTh	Th	H	T	O
		(1)		(1)		
	5	3	8	4	9	5
+		5	6	4	3	4
	5	9	4	9	2	9

d.

	TTh	Th	H	T	O
	(1)	(2)	(1)	(1)	
	2	1	9	8	7
		1	8	3	2
+	5	9	9	0	9
	8	3	7	2	8

e.

	TTh	Th	H	T	O
	(1)	(1)	(2)	(2)	
		3	7	8	5
			1	0	8
		4	7	8	9
+	1	5	0	6	4
	2	3	7	4	6

f.

	L	TTh	Th	H	T	O
		(1)	(1)	(1)	(1)	
	5	2	6	5	3	2
		3	2	0	6	4
+	1	2	2	5	6	5
	6	8	1	1	6	1

Exercise 3 (c)

1. Fill in the blanks :

Ans. a. 5031 + 1112 = **1112** + 5031 b. 4321 + **7141** = 7141 + 4321

c. 4333 + 2089 = 2089 + **4333**

d. 1216 + 2420 + 185 = 2420 + **185** + 1216

e. (320 + 3196) + 99 = 3196 + (320 + **99**)

2. Name of the property :

Ans. a. Zero property of addition

b. Commutative property of addition
c. Associative property of addition.

Exercise 3 (d)

1. Subtract the following :

Ans. a.

TTh	Th	H	T	O
	6	8	3	8	4
–	2	6	2	6	1
	4	2	1	2	3

b.

TTh	Th	H	T	O
	7	9	3	0	6
–	4	6	2	0	5
	3	3	1	0	1

c.

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

d.

L	TTh	Th	H	T	O
	6	8	7	6	3	4
–	2	5	0	5	2	1
	4	3	7	1	1	3

e.

L	TTh	Th	H	T	O
	4	6	4	0	5	6
–	3	4	2	0	3	6
	1	2	2	0	2	0

f.

L	TTh	Th	H	T	O
	5	7	5	9	6	9
–	3	4	2	5	5	9
	2	3	3	4	1	0

2. Find the difference :

Ans. a.

TTh	Th	H	T	O
	9	6	7	8	7
–	8	6	4	3	7
	1	0	3	5	0

b.

TTh	Th	H	T	O
	6	4	6	7	9
–	6	3	5	6	9
		1	1	1	0

c.

L	TTh	Th	H	T	O
	9	6	4	8	9	6
–	5	3	4	2	1	0
	4	3	0	6	8	6

d.

L	TTh	Th	H	T	O
	6	7	6	6	9	8
–	3	4	3	5	3	4
	3	3	3	1	6	4

e.

L	TTh	Th	H	T	O
	7	6	6	4	3	8
–	4	4	3	3	2	1
	3	2	3	1	1	7

f.

L	TTh	Th	H	T	O
	4	9	7	6	9	9
–	3	8	6	5	9	9
	1	1	1	1	0	0

Exercise 3 (e)

1. Subtract :

Ans. a.

TTh	Th	H	T	O
	7	6	0	0	0
–	3	4	3	2	0
	4	1	6	8	0

b.

TTh	Th	H	T	O
	4	8	5	4	5
–	3	3	5	6	6
	1	4	9	7	9

c.

L	TTh	Th	H	T	O
	9	1	0	9	3	2
–	6	0	8	7	8	3
	3	0	2	1	4	9

d.

L	TTh	Th	H	T	O
	8	5	8	4	7	0
–	6	0	1	9	8	3
	2	5	6	4	8	7

e.

L	TTh	Th	H	T	O
	4	3	2	6	5	0
–	1	7	5	3	4	4
	2	5	7	3	0	6

f.

L	TTh	Th	H	T	O
	6	4	3	6	7	3
–	3	1	9	5	8	8
	3	2	4	0	8	5

2. Find the difference and check your answer :

Ans. a.

4 8 3 6 9	
– 1 5 4 6 7	**Check**
3 2 9 0 2	

3 2 9 0 2
+ 1 5 4 6 7
4 8 3 6 9

b.

9 6 2 3 9	
– 7 0 2 9 3	**Check**
2 5 9 4 6	

2 5 9 4 6
+ 7 0 2 9 3
9 6 2 3 9

c.

8 5 1 0 6	
– 3 7 2 5 4	**Check**
4 7 8 5 2	

4 7 8 5 2
+ 3 7 2 5 4
8 5 1 0 6

d.

6 1 5 8 2 4	
– 3 3 7 4 6 9	**Check**
2 7 8 3 5 5	

2 7 8 3 5 5
+ 3 3 7 4 6 9
6 1 5 8 2 4

e.

8 0 6 7 0 4	
– 2 5 9 3 7 0	**Check**
5 4 7 3 3 4	

5 4 7 3 3 4
+ 2 5 9 3 7 0
8 0 6 7 0 4

f.

8 0 0 0 0 0	
– 3 4 9 7 3 0	**Check**
4 5 0 2 7 0	

4 5 0 2 7 0
+ 3 4 9 7 3 0
8 0 0 0 0 0

g.

9 6 0 0 8 5	
– 6 2 5 1 7 8	**Check**
3 3 4 9 0 7	

3 3 4 9 0 7
+ 6 2 5 1 7 8
9 6 0 0 8 5

h.

7 0 0 0 0 0	
– 5 9 8 7 6 5	**Check**
1 0 1 2 3 5	

1 0 1 2 3 5
+ 5 9 8 7 6 5
7 0 0 0 0 0

3. Fill in the boxes.

Ans. a. 41,593 – 0 = **41,593**
b. 78,921 – **78,921** = 0
c. 36,310 – **0** = 36310
d. 3,41,275 – **3,41,275** = 0
e. 45,390 – **1** = 45,389
f. 10,000 – 1 = **9999**

Exercise 3 (f)

1. Solve the following :

Ans. a. **75,322 – 52,600 + 50000**
= 75322 + 50000 – 52600 = 125322 – 52600
= **72722**

b. **97,115 + 31,521 – 20,872**
= 128636 – 20872 = **107764**

c. **56,752 – 14132 + 21531**
= 56,752 + 21531 – 14132
= 78,283 – 14132 = **64151**

d. **3,45,632 + 21,569 – 12000**
= 367201 – 12000 = **355201**

e. **8,51,265 – 2,14,321 + 1,26,000**
= 8,51,265 + 1,26,000 – 2,14,321
= 9,77,265 – 2,14,321 = **7,62,944**

f. **8000 – 75,934 + 1,60,756**
= 8000 + 1,60,756 – 75,934
= 1,68,756 – 75,934 = **92,822**

Exercise 3 (g)

1. Solve :

Ans. 1.

No. of men	=	23,650
No. of women	=	51,173
No. of children	=	+ 60,850
Total population	=	**1,35,673**

So, the total population of the town is 1,35,673.

2.

Lock were produced in February	=	14,705
Lock were produced in March	=	26,020
Lock were produced in April	=	+ 30,750
Total locks produced		**71,475**

So, 71,475 locks were produced in 3 months.

3.

Price of laptop and car	=	₹ 5,50,000
Cost of laptop	=	– ₹ 83,754
∴ Cost of car	=	**₹ 4,66,246**

So, he paid ₹4,66,246 for car.

4. No. of apples in orchard = 55,990
   Sold apples = – 17,897
   So unsold apples = **38,093**
   So, 38,093 apple are left unsold.
5. Mr. Singh's annual income in 2011 = ₹ 4,42,970
   Annual increment = + ₹ 3,00,550
   His income in 2012 = **₹ 7,43,520**
   So, His income in 2012 is ₹743520.
6. Quantity of flour = 8,54,090 kg
   Quantity of Sugar = – 6,23,479 kg
   More flour than sugar in the godown = **2,30,611** kg
   So, There was 2,30,611 kg flour more than the sugar.
7. A shopkeeper earned in first month = ₹ 6,000
   A shopkeeper earned in second month = ₹ 10,252
   A shopkeeper earned in third month = ₹ + 9,278
   He earned money in all = **₹ 25,530**
   So, He earned ₹25,530 in all.
8. Mr. kumar bought a printed for = ₹ 10,350
   Mr. kumar bought a Notepad for = + ₹ 28,755
   Total money required = **₹ 39,105**
   Mr. Kumar sold his old computer for = – ₹ 6,200
   Left money he has to pay = **₹ 32,905**
   So, He payed ₹32,905 finally.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a **2.** a **3.** b **4.** a **5.** b

Chapter

4 Multiplication

Let's Recall

Find :

Ans. a. ₹ 240

	₹ 8 0
×	3
₹	2 4 0

b. ₹ 260

	₹ 4 5
×	4
₹	1 8 0

	₹ 4 0
×	2
₹	8 0

c. ₹ 207

	₹ 3 2
×	1
₹	3 2

	₹ 3 5
×	5
₹	1 7 5

Exercise 4 (a)

1. Fill in the blanks :

Ans. a. $111 \times 578 = 578 \times$ **111**

b. $1321 \times 0 =$ **0**

c. $599 \times 1 =$ **599**

d. $569 \times 257 \times 141 = 141 \times 257 \times$ **569**

e. $(379 \times 456) \times 145 = (145 \times 379) \times$ **456** = **145** $\times 456 \times 379$

2. Find the product :

Ans. a.

H	T	O
2	3	6
×		4
9	4	4

b.

H	T	O
2	8	3
×		5
1	4	1	5

c.

Th	H	T	O
1	3	0	8
×			6
7	8	4	8

d.

Th	H	T	O
4	6	5	3
×			4
1	8	6	1	2

3. Find the product :

Ans. a.

Th	H	T	O
2	4	6	0
×			3
7	3	8	0

b.

Th	H	T	O
1	4	3	2
×			5
7	1	6	0

c.

Th	H	T	O
2	7	8	9
×			2
5	5	7	8

d.

Th	H	T	O
1	9	8	3
×			8
1	5	8	6	4

Exercise 4 (b)

1. Multiply.

Ans. a.

Th	H	T	O
	1	2	5
	×	3	2
	2	5	0
3	7	5	×
4	0	0	0

b.

TTh	Th	H	T	O
		3	7	5
		×	4	3
	1	1	2	5
1	5	0	0	×
1	6	1	2	5

c.

TTh	Th	H	T	O
	1	4	5	2
		×	1	8
1	1	6	1	6
1	4	5	2	×
2	6	1	3	6

2. Find the product.

Ans. a.

Th	H	T	O
	1	2	8
	×	3	2
	2	5	6
3	8	4	×
4	0	9	6

b.

TTh	Th	H	T	O
		6	4	3
		×	1	8
	5	1	4	4
	6	4	3	×
1	1	5	7	4

c.

Th	H	T	O
	1	3	6
	×	4	9
1	2	2	4
5	4	4	×
6	6	6	4

d.

TTh	Th	H	T	O
		4	0	7
		×	3	5
	2	0	3	5
1	2	2	1	×
1	4	2	4	5

e.

TTh	Th	H	T	O
		1	2	3	4
			×	4	8
		9	8	7	2
	4	9	3	6	×
	5	9	2	3	2

f.

TTh	Th	H	T	O
		2	0	5	6
			×	2	2
		4	1	1	2
	4	1	1	2	×
	4	5	2	3	2

Exercise 4 (c)

1. Find the product.

Ans. a. **325 × 400**
= 325 × 4 × 100
= 1300 × 100
= **130,000**

b. **375 × 400**
= 375 × 4 × 100
= 1500 × 100
= **1,50,000**

c. **513 × 500**
= 513 × 5 × 100
= 2565 × 100
= **2,56,500**

d. **106 × 300**
= 106 × 3 × 100
= 318 × 100
= **31,800**

e. **1895 × 100**
= **1,89,500**

f. **3105 × 200**
= 3105 × 2 × 100
= 6210 × 100
= **6,21,000**

2. Find the product.

Ans. a.

L	TTh	Th	H	T	O
			8	0	9
		×	3	1	2
		1	6	1	8
		8	0	9	×
2	4	2	7	×	×
2	5	2	4	0	8

b.

TTh	Th	H	T	O
		4	7	3
	×	2	0	8
	3	7	8	4
	0	0	0	×
9	4	6	×	×
9	8	3	8	4

c.

L	TTh	Th	H	T	O
			6	0	6
		×	4	4	0
			0	0	0
	2	4	2	4	×
2	4	2	4	×	×
2	6	6	6	4	0

d.

L	TTh	Th	H	T	O
			3	8	6
		×	3	0	2
			7	7	2
		0	0	0	×
1	1	5	8	×	×
1	1	6	5	7	2

e.

L	TTh	Th	H	T	O
			4	2	9
		×	2	4	6
		2	5	7	4
	1	7	1	6	×
	8	5	8	×	×
1	0	5	5	3	4

f.

TTh	Th	H	T	O
		5	1	6
	×	1	7	0
		0	0	0
3	6	1	2	×
5	1	6	×	×
8	7	7	2	0

Exercise 4 (d)

1. Tick (✓) the correct answer :

Ans. a. 64 × 10 = i. 604 ☐ ii. 640 ✓ iii. 6400 ☐

b. 89 × 100 = i. 8900 ✓ ii. 890 ☐ iii. 89000 ☐

c. 50 × 1000 = i. 50000 ✓ ii. 5000 ☐ iii. 500 ☐

2. Fill in the blanks :

Ans. a. 53 × 200 = **10600**
b. 48 × 60 = **2880**
c. 129 × 400 = **51600**
d. 96 × 4000 = **384000**
e. 364 × 700 = **254800**
f. 65 × 7000 = **455000**

Exercise 4 (c)

Read carefully and solve. Remember to write statements, show working and give the answer.

Ans. 1. Fee for one month = ₹ 997
No. of months = ×12
1994
997×
Total amount paid by pallavi = **₹ 11964**

So, ₹11,964 paid as fee for a year.

2. No. of mangoes in a box = 135
No. of boxes = ×45
675
540×
So, total no. of mangoes = **6075**

So, 6075 mangoes will be packed in 45 such boxes.

3. Money collected from each member = ₹ 1250
Total members = ×9
Total money collected = **₹ 11250**

So, he collected ₹11250 from 9 members.

4. Our heart beats in a minute = 72
No. of minutes in a day = 60 × 24
= 1440
So, our heart beats in a day = 72 × 1440

		1	4	4 0
			×	7 2
		2	8	8 0
1	0	0	8	0 ×
1	0	3	6	8 0

So, our heart will beat 103680 times in a day.

5. Cost of one book = ₹ 1279
No. of books = ×26
7674
2558×
Total cost of 26 books = **₹ 33254**

So, cost of 26 books is ₹33254.

6. A book weighs = 1288 g
No. of boxes = ×157
Total weight = 9016
6440××
1288××
202216 g

So, total weight of books is 202216 g.

7. A lorry can carry bags of rice = 3432
No. of lorries = ×6
Total bags carried by 6 lorries = **20592**

So, 6 lorries can carry 20592 bags of rice.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. b 3. a 4. c

Fun with Maths

Ans. Take any product from the 7 times table → **63**

Multiply the ones digit by 5 (**3** × 5) → 15

Add the tens digit (15 + **6**) → 21

Multiply the ones digit from the sum by 5 (**1** × 5) → 5

Add the tens digit (5 + **2**) → **7**

Try the same with other products of 7. What do you notice?

NEP

Colour the correct kite

Art Integration

Ans.

a. 1430 × 5 = 7005, 7050, **7150**, 7160

b. 1265 × 15 = 17975, 1875, **18975**, 18795

c. 347 × 225 = 78075, 70075, **87075**, 8005

d. 1500 × 125 = 108500, 87500, **187500**, 187000

e. 25 × 95 = 2375, **2375**, 2300, 2525

f. 827 × 45 = 32715, **37215**, 35712, 35515

Chapter 5 Division

Let's Recall

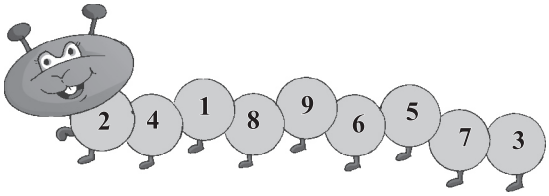
Divide each of the following and colour the answer catepillar :

Ans.

a. 32 ÷ 4 = **8** b. 45 ÷ 9 = **5** c. 20 ÷ 5 = **4**

d. 18 ÷ 9 = **2** e. 10 ÷ 10 = **1** f. 36 ÷ 12 = **3**

g. 14 ÷ 2 = **7** h. 66 ÷ 11 = **6** i. 81 ÷ 9 = **9**



Exercise 5 (a)

1. Fill in the blanks :

Ans. a. $0 \div 256 = \mathbf{0}$ b. $475 \div \mathbf{1} = 475$ c. $\mathbf{421} \div 1 = 421$

d. $80 \div 80 = \mathbf{1}$ e. $112 \div \mathbf{112} = 1$ f. $\mathbf{0} \div 9 = 0$

g. $0 \div 15 = \mathbf{0}$ h. $56 \div 0 =$ not define i. $\mathbf{99} \div 99 = 1$

2. Tick (✓) the correct option :

Ans. a. iii. meaningless

Exercise 5 (b)

1. Divide and check your answer :

Ans. a.

$$\begin{array}{r} 8\overline{)729}\,(91 \\ -72\downarrow \\ \hline 9 \\ -8 \\ \hline 1 \end{array}$$

Checking :

Dividend = Divisor × Quotient + R

729 = 8 × 91 + 1

729 = 728 + 1

729 = 729

L.H.S. = R.H.S.

b.

$$\begin{array}{r} 3\overline{)649}\,(216 \\ -6\downarrow \\ \hline 4 \\ -3\downarrow \\ \hline 19 \\ -18 \\ \hline 1 \end{array}$$

Checking :

Dividend = Divisor × Quotient + R

649 = 3 × 216 + 1

649 = 648 + 1

649 = 649

L.H.S. = R.H.S.

c.

$$\begin{array}{r} 9\overline{)978}\,(108 \\ -9\downarrow\downarrow \\ \hline 78 \\ -72 \\ \hline 6 \end{array}$$

Checking :

Dividend = Divisor × Quotient + R

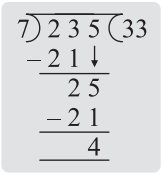
978 = 9 × 108 + 6

978 = 972 + 6

978 = 978

L.H.S. = R.H.S.

d.



Checking :

Dividend = Divisor × Quotient + R

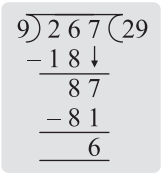
235 = 7 × 33 + 4

235 = 231 + 4

235 = 235

L.H.S. = R.H.S.

e.



Checking :

Dividend = Divisor × Quotient + R

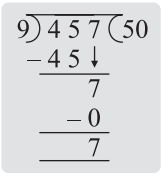
267 = 9 × 29 + 6

267 = 261 + 6

267 = 267

L.H.S. = R.H.S.

f.



Checking :

Dividend = Divisor × Quotient + R

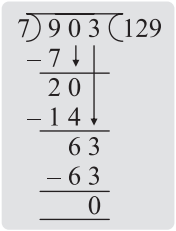
457 = 9 × 50 + 7

457 = 450 + 7

457 = 457

L.H.S. = R.H.S.

g.



Checking :

Dividend = Divisor × Quotient + R

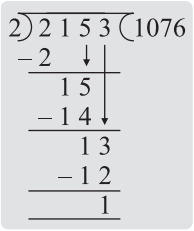
903 = 7 × 129 + 0

903 = 903 + 0

903 = 903

L.H.S. = R.H.S.

h.



Checking :

Dividend = Divisor × Quotient + R

2153 = 2 × 1076 + 1

2153 = 2152 + 1

2153 = 2153

L.H.S. = R.H.S.

2. **Find the quotient and the remainder :**

Ans. a.

$8\overline{)924}(115$
-8
12
-8
44
-40
4

Q = 115, R = 4

b.

$4\overline{)844}(211$
-8
4
-4
4
-4
0

Q = 211, R = 0

c.

$3\overline{)969}(323$
-9
6
-6
9
-9
0

Q = 323, R = 0

d.

$5\overline{)565}(113$
-5
6
-5
15
-15
0

Q = 113, R = 0

e.

$6\overline{)738}(123$
-6
13
-12
18
-18
0

Q = 123, R = 0

f.

$7\overline{)874}(124$
-7
17
-14
34
-28
6

Q = 124, R = 6

g.

$3\overline{)9543}(3181$
-9
5
-3
24
-24
3
-3
0

Q = 3181, R = 0

h.

$6\overline{)8616}(1436$
-6
26
-24
21
-18
36
-36
0

Q = 1436, R = 0

Exercise 5 (c)

1. **Divide the following and write the quotient and remainder :**

Ans. a.

$62\overline{)304}(4$
-248
56

Q = 4, R = 56

b.

$18\overline{)141}(7$
-126
15

Q = 7, R = 15

c.

$42\overline{)345}(8$
-336
9

Q = 8, R = 9

d.

```
44)433(9
  -396
   37
```

Q = 9, R = 37

e.

```
35)257(7
  -245
   12
```

Q = 7, R = 12

f.

```
81)735(9
  -729
    6
```

Q = 9, R = 6

g.

```
21)104(4
  -84
   20
```

Q = 4, R = 20

h.

```
56)460(8
  -448
   12
```

Q = 8, R = 12

2. Divide and check your answer :

Ans. a.

```
48)6400(133
  -48↓|
   160|
  -144↓
    160
   -144
     16
```

Check :
Q × D + R = Dividend
= 133 × 48 + 16
= 6384 + 16
= 6400 (Dividend)
So, answer is correct.

b.

```
27)3533(130
  -27↓|
    83|
   -81↓
     23
    -00
     23
```

Check :
Q × D + R = Dividend
= 130 × 27 + 23
= 3510 + 23
= 3533 (Dividend)
So, answer is correct.

c.

```
75)6301(84
  -600↓
    301
   -300
      1
```

Check :
Q × D + R = Dividend

d.

```
28)4424(158
  -28↓|
   162|
  -140↓
    224
   -224
      0
```

Check :
Q × D + R = Dividend

= 84 × 75 + 1
= 6300 + 1
= 6301 (Dividend)
So, answer is correct.

= 158 × 28 + 0
= 4424 + 0
= 4424 (Dividend)
So, answer is correct.

e.

```
93) 5 2 0 4 (55
   – 4 6 5 ↓
     5 5 4
   – 4 6 5
     8 9
```

Check :
Q × D + R = Dividend
= 55 × 93 + 89
= 5115 + 89
= 5204 (Dividend)
So, answer is correct.

f.

```
62) 9 0 8 4 (146
   – 6 2 ↓ |
     2 8 8
   – 2 4 8 ↓
       4 0 4
     – 3 7 2
       3 2
```

Check :
Q × D + R = Dividend
= 146 × 62 + 32
= 9052 + 32
= 9084 (Dividend)
So, answer is correct.

g.

```
17) 4 1 1 0 (241
   – 3 4 ↓ |
     7 1
   – 6 8 ↓
       3 0
     – 1 7
       1 3
```

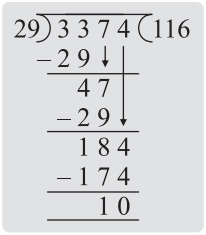
Check :
Q × D + R = Dividend
= 241 × 17 + 13
= 4097 + 13
= 4110 (Dividend)
So, answer is correct.

h.

```
53) 2 0 8 9 (39
   – 1 5 9 ↓
     4 9 9
   – 4 7 7
     2 2
```

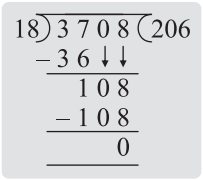
Check :
Q × D + R = Dividend
= 39 × 53 + 22
= 2067 + 22
= 2089 (Dividend)
So, answer is correct.

i.



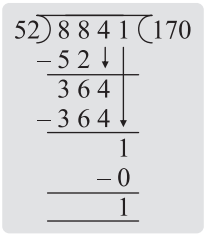
Check :
Q × D + R = Dividend
= 116 × 29 + 10
= 3364 + 10
= 3374 (Dividend)
So, answer is correct.

j.



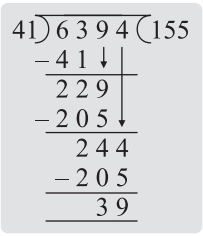
Check :
Q × D + R = Dividend
= 206 × 18 + 0
= 3708 + 0
= 3708 (Dividend)
So, answer is correct.

k.



Check :
Q × D + R = Dividend
= 170 × 52 + 1
= 8840 + 1
= 8841 (Dividend)
So, answer is correct.

l.



Check :
Q × D + R = Dividend
= 155 × 41 + 39
= 6355 + 39
= 6394 (Dividend)
So, answer is correct.

Exercise 5 (d)

1. Fill in the blanks :

Ans.

a.	3200 ÷ 100	=	**32**	b.	69000 ÷ 1000	=	**69**
c.	3000 ÷ 100	=	**30**	d.	612000 ÷ 1000	=	**612**
e.	15000 ÷ 1000	=	**15**	f.	20000 ÷ 1000	=	**20**
g.	780 ÷ 10	=	**78**	h.	92000 ÷ 1000	=	**92**

2. Divide the following numbers by 10 and write the quotient and remainder :

Ans. a.

```
10) 3 9 8 (39
  – 3 0 ↓
    9 8
  – 9 0
      8
```

Q = 39, R = 8

b.

```
10) 8 9 4 (89
  – 8 0 ↓
    9 4
  – 9 0
      4
```

Q = 89, R = 4

c.

```
10) 1 0 1 1 (101
  – 1 0 ↓ ↓
      1 1
    – 1 0
        1
```

Q = 101, R = 1

d.

```
10) 3 9 2 2 (392
  – 3 0 ↓ |
    9 2   |
  – 9 0 ↓ |
      2 2 |
    – 2 0 |
        2 |
```

Q = 392, R = 2

e.

```
10) 4 6 2 (46
  – 4 0 ↓
    6 2
  – 6 0
      2
```

Q = 46, R = 2

f.

```
10) 9 6 1 (96
  – 9 0 ↓
    6 1
  – 6 0
      1
```

Q = 96, R = 1

g.

```
10) 2 6 5 4 (265
  – 2 0 ↓ |
    6 5   |
  – 6 0 ↓ |
      5 4 |
    – 5 0 |
        4 |
```

Q = 265, R = 4

h.

```
10) 1 2 3 4 5 (1234
  – 1 0 ↓ | |
    2 3   | |
  – 2 0 ↓ | |
      3 4 | |
    – 3 0 ↓ |
        4 5 |
      – 4 0 |
          5 |
```

Q = 1234, R = 5

3. Divide the following numbers by 100 :

Ans. a.

```
100) 9 2 5 (9
   – 9 0 0
     2 5
```

Q = 9, R = 25

b.

```
100) 3 4 9 8 (34
   – 3 0 0 ↓
     4 9 8
   – 4 0 0
       9 8
```

Q = 34, R = 98

c.

```
100) 52630 (526
   –500 ↓ |
     263  |
   –200 ↓ |
      630 |
    –600  |
       30 |
```

Q = 526, R = 30

d.

```
100) 4810 (48
    -400↓
     810
    -800
      10
```

Q = 48, R = 10

e.

```
100) 13629 (136
    -100↓
     362
    -300↓
      629
     -600
       29
```

Q = 136, R = 29

f.

```
100) 71808 (718
    -700↓
     180
    -100↓
      808
     -800
       8
```

Q = 718, R = 8

g.

```
100) 5629 (56
   -500↓
    629
   -600
     29
```

Q = 56, R = 29

h.

```
100) 25607 (256
    -200↓
     560
    -500↓
      607
     -600
        7
```

Q = 256, R = 7

i.

```
100) 239411 (2394
    -200↓
     394
    -300↓
      941
     -900↓
       411
      -400
        11
```

Q = 2394, R = 11

j.

```
100) 7201 (72
   -700↓
    201
   -200
      1
```

Q = 72, R = 1

k.

```
100) 48029 (480
    -400↓
     802
    -800↓
      29
     -00
      29
```

Q = 480, R = 29

l.

```
100) 623222 (6232
    -600↓
     232
    -200↓
      322
     -300↓
       222
      -200
        22
```

Q = 6232, R = 22

4. Divide the following numbers by 1000 :

Ans. a.

```
1000) 3 8 5 6 (3
    −3 0 0 0
      8 5 6
```

Q = 3, R = 856

b.

```
1000) 51058 (51
    −5000↓
      1058
    −1000
       58
```

Q = 51, R = 58

c.

```
1000) 5 2 0 9 (5
    − 5 0 0 0
      2 0 9
```

Q = 5, R = 209

d.

```
1000) 72002 (72
    −7000↓
      2002
    −2000
       2
```

Q = 72, R = 2

e.

```
1000) 6 8 0 0 (6
    − 6 0 0 0
      8 0 0
```

Q = 6, R = 800

f.

```
1000) 21347 (21
    −2000↓
      1347
    −1000
       347
```

Q = 21, R = 347

g.

```
1000) 460723 (460
    −4000↓
      6072
    −6000↓
       723
      −000
       723
```

Q = 460, R = 723

h.

```
1000) 62820 (62
    −6000↓
      2820
    −2000
       820
```

Q = 62, R = 820

i.

```
1000) 572009 (572
    −5000↓
      7200
    −7000↓
      2009
    −2000
         9
```

Q = 572, R = 9

j.

```
1000) 590632 (590
    −5000↓
      9063
    −9000↓
       632
      −000
       632
```

Q = 590, R = 632

k.

```
1000) 37954 (37
    −3000↓
      7954
    −7000
       954
```

Q = 37, R = 954

l.

```
1000) 13790 (13
    −1000↓
      3790
    −3000
       790
```

Q = 13, R = 790

Exercise 5 (e)

1. Fill in the table and estimate the quotient :

Ans.

	Problem	Estimated Quotient	Actual Quotient
a.	78 ÷ 21	**4**	**3**
b.	92 ÷ 18	**5**	**5**
c.	289 ÷ 69	**4**	**4**
d.	691 ÷ 51	**14**	**13**
e.	753 ÷ 29	**25**	**25**

2. Match the columns as shown :

Ans.

QUESTION	ROUNDS TO	DIVISION	ESTIMATED QUOTIENT
a. 193 ÷ 24	090 ÷ 40	30 ÷ 4	9
b. 315 ÷ 43	090 ÷ 30	19 ÷ 2	2
c. 91 ÷ 36	190 ÷ 20	90 ÷ 4	3
d. 86 ÷ 27	300 ÷ 40	09 ÷ 3	7
e. 868 ÷ 37	900 ÷ 40	09 ÷ 4	22

Higher order Thinking Skills (HOTS)

Ans. a.

```
     21
13) 277
   -26↓
     17
    -13
      4
```

Q = **21**, R = **4**

b.

```
    381
9) 3429
  -27↓
    72
   -72↓
    09
    -9
     0
```

Q = **381**, R = **0**

c.

```
     203
14) 2846
   -28↓↓
     046
     -42
       4
```

Q = **203**, R = **4**

Exercise 5 (f)

Solve these word problems :

Ans. 1. No. of pencils = 868 pencils

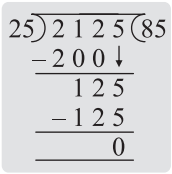
No. of boxes = 7

No. of pencils in each box = 868 ÷ 7 = 124

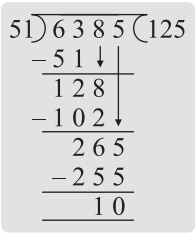
So, There are 124 pencils in each box.

```
7) 868 (124
  -7↓
   16
  -14↓
    28
   -28
     0
```

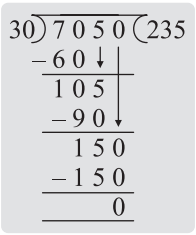
2. Total money spent on tickets = ₹ 2125
No. of tickets = 25
∴ Cost of one ticket = ₹ 2125 ÷ 25 = ₹85
So, cost of 1 ticket is ₹85.



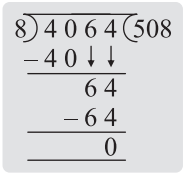
3. No. of stickers = 6385
No. of children = 51
So, each child will get stickers = 6385 ÷ 51
= 125
So, each child will get 125 stickers and 10 stickers are left over.



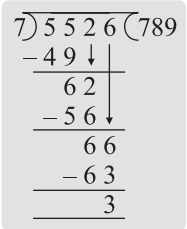
4. No. of toy produced = 7050
No. of days = 30
No. of Toys produced in a day = 7050 ÷ 30
= 235
So, 235 toys are produced in a day.



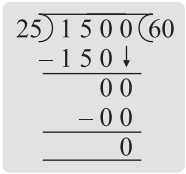
5. Total calories = 4064
Quantity of mango squash = 8 litres
Calories in one litre of mango squash = 4064 ÷ 8
= 508
Hence, There are 508 calories in each litre of mango squash.



6. A librarian has books = 5526
No. of shelves = 7
No. of books in each shelf = 5526 ÷ 7
= 789
So, 789 books will be arranged in each shelf and 3 books will be left over.



7. Total costs=₹ 1500
Quantity of rice = 25 kg
Cost of 1 kg of rice = 1500 ÷ 25
= ₹ 60
So, cost of 1 kg of rice is ₹60.

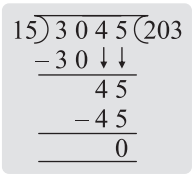


Exercise 5 (g)

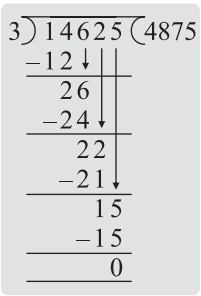
Solve the following questions :

Ans. 1. No. of dresses = 21
No. of days = 7
He will stitch in one day = 21 ÷ 7 = 3 dresse
So, He will stitch dresses in 3 weeks = 3 × 3 × 7 = 63 dresses

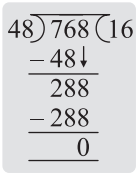
2. Cost of 15 T-shirts = ₹ 3045
Cost of 1 T-shirts = ₹ 3045 ÷ 15
∴ Cost of 5 T-shirts = 203 × 5
= ₹ 1015



3. Vidhya sold 3 mixers for = ₹ 14625
She sold 1 mixer for = ₹ 14625 ÷ 3
= ₹ 4875
She sold 5 mixers for = ₹ 4875 × 5
= ₹ 24375



4. By selling 48 kg of apples he gets = ₹ 768
By selling 1 kg of apples he gets = ₹ 768 ÷ 48
= ₹ 16
By selling 4 kg of apples he gets = ₹ 16 × 4
= ₹ 64



5. Cost of 5 Chocolates = ₹ 240
Cost of 1 Chocolates = ₹ 240 ÷ 5
Cost of 7 Chocolates = 48 × 7
= ₹ 336

5) 240 (48
– 20↓
40
– 40
0

6. Cost of 20 toy cars = ₹ 360
Cost of 1 toy cars = ₹ 360 ÷ 20
= ₹ 18
So, Cost of 23 cars = ₹ 18 × 23
= ₹ 414

20) 360 (18
– 20↓
160
– 160
0

7. Cost of 5 kg of rice = ₹ 270
Cost of 1 kg of rice = ₹ 270 ÷ 5
= ₹ 54
So, Cost of 9 kg of rice = ₹ 54 × 9
= ₹ 486

5) 270 (54
– 25↓
20
– 20
0

8. Cost of 12 m of pipe = ₹ 48
Cost of 1 m of pipe = ₹ 48 ÷ 12 = ₹ 4
So, Cost of 11 m of pipe = ₹ 4 × 11 = ₹ 44
= ₹ 44

9. Cost of 5 books = ₹ 2950
Cost of 1 book = ₹ 2950 ÷ 5
= ₹ 590
So, Cost of 1 book = ₹ 590 × 9
= ₹ 5310

5) 2 9 5 0 (590
– 2 5 ↓
4 5
– 4 5 ↓
0
– 0
0

10. Vimal make baskets in 3 days = 57 baskets
Vimal make basket in 1 day = 57 ÷ 3 = 19
Vimal make baskets in 2 week = 19 × 2 × 7 = 266 baskets

11. Cost of a dozen (12) bananas = ₹ 300
Cost of 1 banana = ₹ 300 ÷ 12 = ₹ 25
Cost of 14 bananas = ₹ 25 × 14 = ₹ 350

12. The rent of house for 1 year (12 months) = ₹ 48120

The rent of 1 month = ₹ 48120 ÷ 12

= ₹ 4010

So, The rent of 7 months = ₹ 4010 × 7

= ₹ 28070

12) 48120 (4010
– 48
12
– 12
0
– 0
0

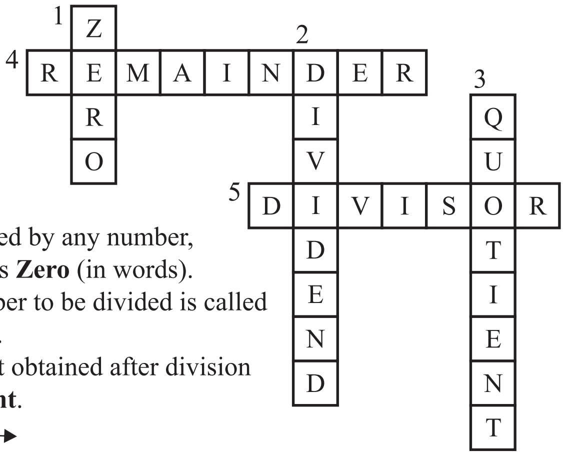
Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b   2. b   3. a   4. c

NEP

Read the clues and solve the puzzle.   Experiential Learning



Ans. **Down ↓**

1. 0 is divided by any number, quotient is **Zero** (in words).
2. The number to be divided is called **dividend**.
3. The result obtained after division is **quotient**.

Across →

4. The number that is left over after finding the quotient is called **remainder**.
5. The number by which the dividend is divided is called **divisor**.

Fun with Maths

Ans. 16 trees, we should need plant more trees to fullfill 17th row.

Chapter

6 Multiples and Factors

Let's Recall

1. Determine the first five multiples of each of the following numbers.

a. 6 = 6, 12, 18, 24, 30

b. 8 = 8, 16, 24, 32, 40

c. 12 = 12, 24, 36, 48, 60

d. 25 = 25, 50, 75, 100, 125

2. Tick (✓) the numbers divisible by the

a. 2		1470,	✓	5582,	✓	1557,	✓	3326
b. 4		5445,		4444,	✓	8978,		7,822
c. 5		6675,	✓	8512,		6827,	✓	8170
d. 8		1772,		2983,		6868,	✓	8888

Exercise 6 (a)

1. Write the first five multiples of the following :

Ans.

a. 5,	**5**	**10**	**15**	**20**	**25**
b. 4,	**4**	**8**	**12**	**16**	**20**
c. 8,	**8**	**16**	**24**	**32**	**40**
d. 20,	**20**	**40**	**60**	**80**	**100**
e. 14,	**14**	**28**	**42**	**56**	**70**

2. Write the following multiples :

Ans.

a. 6th multiple of 6 → 36

b. 4th multiple of 14 → 56

c. 5th multiple of 13 → 65

d. 9th multiple of 9 → 81

e. 7th multiple of 11 → 77

f. 7th multiple of 8 → 56

3. Answer the following in Yes or No :

Ans. a. Yes b. Yes c. No d. Yes

4. Find the first two common multiples of :

Ans. a. Multiples of 3 **3, 6, 9, 12, 15, 18, 21, 24, 27, 30**
Multiples of 4 **4, 8, 12, 16, 20, 24, 28, 32, 36, 40**
Common multiples of 3 and 4 **12, 24**

b. Multiples of 5 **5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60**
Multiples of 6 **6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66**
Common multiples of 5 and 6 **30, 60**

c. Multiples of 3 **3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33**
Multiples of 5 **5, 10, 15, 20, 25, 30, 35, 40, 45, 50**
Common multiples of 3 and 5 **15, 30**

5. Find the LCM of the following :

Ans. a. **6 and 8**

Multiple of 6 = 6, 12, 18, **24,** 30, 36, 42, **48,** 54, 60
Multiple of 8 = 8, 16, **24,** 32, 40, **48,** 56, 64, 72, 80
So, LCM = 24

b. **3 and 5**

Multiple of 3 = 3, 6, 9, 12, **15,** 18, 21, 24, 27, **30**
Multiple of 5 = 5, 10, **15,** 20, 25, **30,** 35, 40, 45, 50
So, LCM = 15

c. **10 and 12**

Multiple of 10 = 10, 20, 30, 40, 50, **60,** 70, 80, 90, 100, 110, **120**
Multiple of 12 = 12, 24, 36, 48, **60,** 72, 84, 96, 108, **120**
So, LCM = 60

Exercise 6 (b)

1. Find factors of the following.

Ans. a. **16**

16 = 1 × 16
= 2 × 8
= 4 × 4
So, factors of 16
= 1, 2, 4, 8, 16

b. **12**

12 = 1 × 12
= 2 × 6
= 3 × 4
So, factors of 12
= 1, 2, 3, 4, 6, 12

c. **42**

$42 = 1 \times 42$
$= 2 \times 21$
$= 3 \times 14$
$= 6 \times 7$

So, factors of 42
$= 1, 2, 3, 6, 7, 14, 21, 42$

d. **25**

$25 = 1 \times 25$
$= 5 \times 5$

So, factors of 25
$= 1, 5, 25$

e. **54**

$54 = 1 \times 54$
$= 2 \times 27$
$= 3 \times 18$
$= 6 \times 9$

So, factors of 54
$= 1, 2, 3, 6, 9, 18, 27, 54$

f. **60**

$60 = 1 \times 60$
$= 2 \times 30$
$= 3 \times 20$
$= 4 \times 15$
$= 5 \times 12$
$= 6 \times 10$

So, factors of 60
$= 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60$

2. Write all the factors of the numbers in each pair. Then find the common factors.

Ans. a. **21, 14**

Factors of 21 = 1, 3, 7, 21
Factors of 14 = 1, 2, 7, 14
Common Factors = 1, 7

b. **27, 24**

Factors of 27 = 1, 3, 9, 27
Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24
Common Factors = 1, 3

c. **6, 16**

Factors of 6 = 1, 2, 3, 6
Factors of 16 = 1, 2, 4, 8, 16
Common Factors = 1, 2

d. **20, 18**

Factors of 20 = 1, 2, 4, 5, 10, 20
Factors of 18 = 1, 2, 3, 6, 9, 18
Common Factors = 1, 2

e. **20, 30**

Factors of 20	=	1, 2, 4, 5, 10, 20
Factors of 30	=	1, 2, 3, 5, 6, 10, 15, 30
Common Factors	=	1, 2, 5, 10

f. **30, 45**

Factors of 30	=	1, 2, 3, 5, 6, 10, 15, 30
Factors of 45	=	1, 3, 5, 9, 15, 45
Common Factors	=	1, 3, 5, 15

g. **22, 4**

Factors of 22	=	1, 2, 11, 22
Factors of 4	=	1, 2, 4
Common Factors	=	1, 2

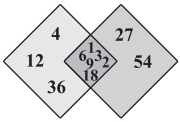
h. **10, 25**

Factors of 10	=	1, 2, 5, 10
Factors of 25	=	1, 5, 25
Common Factors	=	1, 5

3. Write all the factors of these numbers. Write the common factors in the part shaded green.

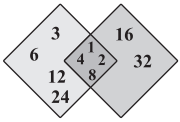
Ans. a. **36, 54**

Factors of 36	**1, 2, 3, 4, 6, 9, 12, 18, 36**
Factors of 54	**1, 2, 3, 6, 9, 18, 27, 54**
Common factors	**1, 2, 3, 6, 9, 18**



b. **24, 32**

Factors of 24	**1, 2, 3, 4, 6, 8, 12, 24**
Factors of 32	**1, 2, 4, 8, 16, 32**
Common factors	**1, 2, 4, 8**



Exercise 6 (c)

1. Colour the boxes with even number blue and odd number red.

Ans.

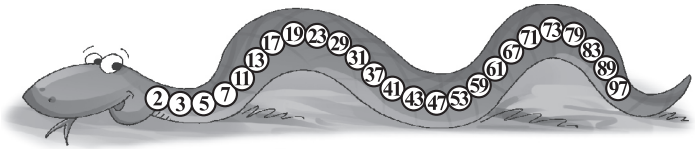
B 2	R 17	B 12	B 22	R 47	B 40	R 27
B 16	B 8	R 11	R 3	B 56	B 20	B 24
R 19	R 1	R 9	B 4	R 75	R 35	R 49
B 60	R 59	B 18	R 5	B 58	R 65	B 70
B 46	R 53	R 7	B 90	B 84	R 71	B 74
R 93	B 48	B 6	B 64	R 51	R 45	R 99

2. Write the following :

Ans. a. 1 b. 999 c. 2 d. 998

3. Write the prime numbers between 1 and 100 in the snake.

Ans.



4. Check whether the number is prime or composite by listing its factors.

Ans. a. **5**

Factors of 5 = 1, 5

So, It is a prime number.

b. **12**

Factors of 12 = 1, 2, 3, 4, 6, 12

So, It is a composite number.

c. **15**

Factors of 15 = 1, 3, 5, 15

So, It is not a prime no.

d. **27**

Factors of 27 = 1, 3, 9, 27

So, It is a composite number.

e. **31**
Factors of 31 = 1, 31
So, It is a prime number.

f. **39**
Factors of 39 = 1, 3, 13, 39
So, It is a composite number.

g. **52**
Factors of 52 = 1, 2, 4, 13, 26, 52
So, It is a composite number.

h. **60**
Factors of 60 = 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
So, It is a composite number.

i. **67**
Factors of 67 = 1, 67
So, It is a prime number.

j. **89**
Factors of 89 = 1, 89
So, It is a prime number.

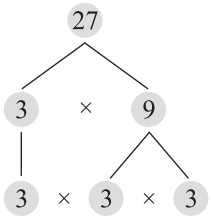
k. **95**
Factors of 95 = 1, 5, 19, 95
So, It is a composite number.

l. **99**
Factors of = 1, 3, 9, 11, 33, 99
So, It is a composite number.

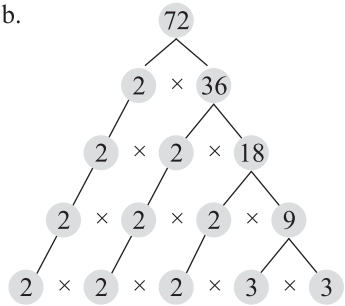
Exercise 6 (d)

1. Find the prime factors of given numbers by using factor tree method :

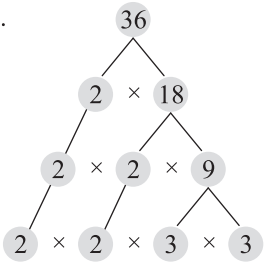
Ans. a.



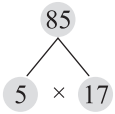
b.



c.



d.



2. Find the prime factors of given numbers by using division method :

Ans. a.

2	32
2	16
2	8
2	4
2	2
	1

Prime factors of 32
$= 2 \times 2 \times 2 \times 2 \times 2$

b.

2	96
2	48
2	24
2	12
2	6
3	3
	1

Prime factors of 96
$= 2 \times 2 \times 2 \times 2 \times 2 \times 3$

c.

2	84
2	42
3	21
7	7
	1

Prime factors of 84
$= 2 \times 2 \times 3 \times 7$

d.

2	196
2	98
7	49
7	7
	1

Prime factors of 196
$= 2 \times 2 \times 7 \times 7$

Exercise 6 (e)

1. In each column put a (✓) if the number at left is divisible by the number at the top of the column. Otherwise put (✗) :

Ans.

	Numbers	2	3	4	5	10
a.	524	✓	✗	✓	✗	✗

b.	240	✓	✓	✓	✓	✓
c.	1155	✗	✓	✗	✓	✗
d.	26580	✓	✓	✓	✓	✓
e.	98664	✓	✓	✓	✗	✗
f.	39042	✓	✓	✗	✗	✗

2. Which of all following numbers are divisible :

Ans. a. by 2?

i. 8241 ☐ ii. 9532 ✓ iii. 3863 ☐ iv. 5869 ☐

b. by 3?

i. 2124 ✓ ii. 9531 ✓ iii. 2401 ☐ iv. 3090 ✓

c. by 4?

i. 8677 ☐ ii. 2122 ☐ iii. 9531 ☐ iv. 3084 ✓

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. b 3. c 4. b

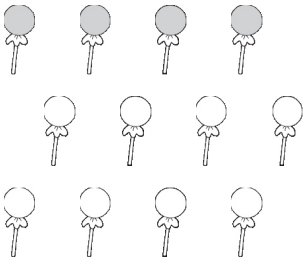
Chapter

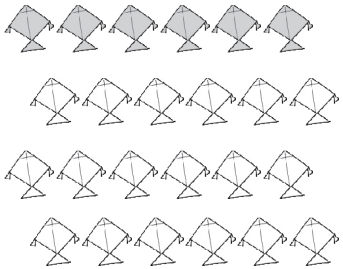
7 Fractions

Let's Recall

1. Colour the objects to show the fraction of the following collections :

Ans. a. $\frac{1}{3}$ of 12 lollipos b. $\frac{1}{4}$ of 24 kites





Exercise 7 (a)

1. Colour all the proper fractions in red and improper fractions in green.

Ans. $\frac{11}{3}$ G $\frac{3}{5}$ R $\frac{11}{8}$ G $\frac{5}{4}$ G $\frac{1}{2}$ R $\frac{1}{5}$ R $\frac{12}{7}$ G $\frac{9}{13}$ R

$\frac{6}{5}$ G $\frac{2}{3}$ R $\frac{13}{3}$ G $\frac{9}{11}$ R $\frac{9}{7}$ G $\frac{8}{20}$ R $\frac{15}{7}$ G $\frac{2}{4}$ R

2. Convert the following improper fractions into mixed fractions :

Ans. a. $\frac{35}{6}$

$$\begin{array}{r|l} 6 & 35 \\ -30 & 5 \\ \hline 5 & \end{array}$$

So, mixed fraction = $5\frac{5}{6}$

b. $\frac{25}{6}$

$$\begin{array}{r|l} 6 & 25 \\ -24 & 4 \\ \hline 1 & \end{array}$$

So, mixed fraction = $4\frac{1}{6}$

c. $\frac{18}{4}$

$$\begin{array}{r|l} 4 & 18 \\ -16 & 4 \\ \hline 2 & \end{array}$$

So, mixed fraction = $4\frac{2}{4}$

d. $\frac{8}{3}$

$$\begin{array}{r|l} 3 & 8 \\ -6 & 2 \\ \hline 2 & \end{array}$$

So, mixed fraction = $2\frac{2}{3}$

e. $\frac{54}{5}$

$$\begin{array}{r|l} 5 & 54 \\ -5\downarrow & 10 \\ \hline 4 & \\ -0 & \\ \hline 4 & \end{array}$$

So, mixed fraction = $10\frac{4}{5}$

f. $\frac{80}{7}$

$$\begin{array}{r|l} 7 & 80 \\ -7\downarrow & 11 \\ \hline 10 & \\ -7 & \\ \hline 3 & \end{array}$$

So, mixed fraction = $11\frac{3}{7}$

g. $\frac{44}{5}$

$$\begin{array}{r|l} 5 & 44 \\ -40 & 8 \\ \hline 4 & \end{array}$$

h. $\frac{15}{7}$

$$\begin{array}{r|l} 7 & 15 \\ -14 & 2 \\ \hline 1 & \end{array}$$

So, mixed fraction = $8\frac{4}{5}$

So, mixed fraction = $2\frac{1}{7}$

i. $\frac{17}{2}$

$$\begin{array}{r|l} 2 & 17 \\ -16 & 8 \\ \hline & 1 \end{array}$$

j. $\frac{92}{11}$

$$\begin{array}{r|l} 11 & 92 \\ -88 & 8 \\ \hline & 4 \end{array}$$

So, mixed fraction = $8\frac{1}{2}$

So, mixed fraction = $8\frac{4}{11}$

3. Convert the following mixed fractions into improper fractions :

Ans. a. $4\frac{7}{9}$

$= \frac{4 \times 9 + 7}{9}$

$= \frac{36 + 7}{9} = \frac{43}{9}$

b. $3\frac{3}{5}$

$= \frac{3 \times 5 + 3}{5}$

$= \frac{15 + 3}{5} = \frac{18}{5}$

c. $6\frac{5}{8}$

$= \frac{6 \times 8 + 5}{8}$

$= \frac{48 + 5}{8} = \frac{53}{8}$

d. $3\frac{3}{7}$

$= \frac{7 \times 3 + 3}{7}$

$= \frac{21 + 3}{7} = \frac{24}{7}$

e. $11\frac{2}{3}$

$= \frac{11 \times 3 + 2}{3}$

$= \frac{33 + 2}{3} = \frac{35}{3}$

f. $4\frac{1}{2}$

$= \frac{4 \times 2 + 1}{2}$

$= \frac{8 + 1}{2} = \frac{9}{2}$

g. $2\frac{1}{9}$

$= \frac{2 \times 9 + 1}{9}$

$= \frac{18 + 1}{9} = \frac{19}{9}$

h. $2\frac{2}{7}$

$= \frac{2 \times 7 + 2}{7}$

$= \frac{14 + 2}{7} = \frac{16}{7}$

i. $2\frac{2}{5}$

$= \frac{2 \times 5 + 2}{5}$

$= \frac{10 + 2}{5} = \frac{12}{5}$

j. $8\frac{3}{4}$

$= \frac{8 \times 4 + 3}{4} = \frac{32 + 3}{4} = \frac{35}{4}$

Exercise 7 (b)

1. Complete the following :

Ans. a. $\frac{2}{3} = \frac{10}{15}$ b. $\frac{1}{6} = \frac{7}{42}$ c. $\frac{7}{22} = \frac{35}{110}$

d. $\frac{6}{17} = \frac{12}{34}$ e. $\frac{8}{9} = \frac{24}{27}$ f. $\frac{11}{50} = \frac{44}{200}$

2. Write the first three equivalent fractions of the following :

Ans. a. $\mathbf{\frac{1}{9}} = \frac{1}{9}, \frac{2}{18}, \frac{3}{27}$ b. $\mathbf{\frac{3}{5}} = \frac{3}{5}, \frac{6}{10}, \frac{9}{15}$

c. $\mathbf{\frac{2}{7}} = \frac{2}{7}, \frac{4}{14}, \frac{6}{21}$ d. $\mathbf{\frac{4}{11}} = \frac{4}{11}, \frac{8}{22}, \frac{12}{33}$

e. $\mathbf{\frac{7}{10}} = \frac{7}{10}, \frac{14}{20}, \frac{21}{30}$ f. $\mathbf{\frac{5}{6}} = \frac{5}{6}, \frac{10}{12}, \frac{15}{18}$

3. Write an equivalent fraction of $\frac{5}{7}$ with :

Ans. a. **numerator = 20**

$\frac{5}{7} = \frac{20}{\square}$

$5 \times \square = 7 \times 20$

$\square = \frac{7 \times 20}{5}$

$\boxed{\square = 28}$

So, $\frac{5}{7} = \frac{20}{28}$

b. **denominator = 21**

$\frac{5}{7} = \frac{\square}{21}$

$5 \times 21 = 7 \times \square$

$\square = \frac{5 \times 21}{7}$

$\boxed{\square = 15}$

So, $\frac{5}{7} = \frac{15}{21}$

c. **numerator = 25**

$\frac{5}{7} = \frac{25}{\square}$

$5 \times \square = 7 \times 25$

$\square = \frac{7 \times 25}{5}$

$\boxed{\square = 35}$

So, $\frac{5}{7} = \frac{25}{35}$

4. Check whether the following pairs of fractions are equivalent or not :

Ans. a. $\frac{3}{4}$, $\frac{9}{12}$

$\frac{3}{4} \times \frac{9}{12}$

Since, $36 = 36$

So, $\frac{3}{4} = \frac{9}{12}$

b. $\frac{7}{9}$, $\frac{21}{36}$

$\frac{7}{9} \times \frac{21}{36}$

Since, $252 \neq 189$

So, $\frac{7}{9} > \frac{21}{36}$

c. $\frac{2}{3}$, $\frac{12}{18}$

$\frac{2}{3} \times \frac{12}{18}$

Since, $36 = 36$

So, $\frac{2}{3} = \frac{12}{18}$

d. $\frac{4}{9}$, $\frac{32}{63}$

$\frac{4}{9} \times \frac{32}{63}$

Since, $252 < 288$

So, $\frac{4}{9} < \frac{32}{63}$

e. $\frac{2}{7}$, $\frac{18}{28}$

$\frac{2}{7} \times \frac{18}{28}$

Since, $56 < 126$

So, $\frac{2}{7} < \frac{18}{28}$

f. $\frac{5}{6}$, $\frac{20}{24}$

$\frac{5}{6} \times \frac{20}{24}$

Since, $120 = 120$

So, $\frac{5}{6} = \frac{20}{24}$

5. Reduce the following fractions to the lowest terms

Ans. To Reduce the fractions in the lowest terms, we must divide both numerator and denominator by their HCF.

a. $\frac{\mathbf{24}}{\mathbf{32}} = \frac{24 \div 8}{32 \div 8} = \frac{3}{4}$

b. $\frac{\mathbf{6}}{\mathbf{24}} = \frac{6 \div 6}{24 \div 6} = \frac{1}{4}$

c. $\frac{\mathbf{30}}{\mathbf{45}} = \frac{30 \div 15}{45 \div 15} = \frac{2}{3}$

d. $\frac{\mathbf{16}}{\mathbf{18}} = \frac{16 \div 2}{18 \div 2} = \frac{8}{9}$

e. $\frac{\mathbf{42}}{\mathbf{48}} = \frac{42 \div 6}{48 \div 6} = \frac{7}{8}$

f. $\frac{\mathbf{85}}{\mathbf{100}} = \frac{85 \div 5}{100 \div 5} = \frac{17}{20}$

Exercise 7 (c)

1. Use > < or = :

Ans. a. $\frac{5}{7} > \frac{3}{7}$ b. $1\frac{3}{11} < 2\frac{5}{11}$ c. $\frac{4}{3} > \frac{4}{5}$ d. $\frac{11}{12} > \frac{10}{12}$

2. Circle the greatest and cross the smallest fraction in the following.

Ans. a. $\frac{5}{12}$ ✗, $\frac{8}{12}$, $\frac{6}{12}$, (9/12) b. $\frac{1}{3}$, $\frac{1}{4}$, (1/2), $\frac{1}{5}$ ✗ c. $3\frac{1}{4}$ ✗, (8 3/4), $3\frac{4}{5}$, $6\frac{2}{5}$

3. Arrange in ascending order :

Ans. a. $\frac{2}{7}, \frac{4}{7}, \frac{6}{7}, \frac{3}{7}$

There are like fractions.
Since $2 < 3 < 4 < 6$

So, ascending order $= \frac{2}{7} < \frac{3}{7} < \frac{4}{7} < \frac{6}{7}$

b. $\frac{2}{5}, \frac{7}{6}, \frac{6}{5}, \frac{4}{7}$

5	5, 6, 5, 7
6	1, 6, 1, 7
	1, 1, 1, 7

L. C. M. of 5, 6, 5, 7
So, LCM $= 5 \times 6 \times 7 = 210$
Now, by doing same denominator, we have

$\frac{2}{5} = \frac{2 \times 42}{5 \times 42} = \frac{84}{210}$ $\quad \frac{7}{6} = \frac{7 \times 35}{6 \times 35} = \frac{245}{210}$

$\frac{6}{5} = \frac{6 \times 42}{5 \times 42} = \frac{252}{210}$ $\quad \frac{4}{7} = \frac{4 \times 30}{7 \times 30} = \frac{120}{210}$

Since : $84 < 120 < 245 < 252$

So, $\frac{2}{5} < \frac{4}{7} < \frac{7}{6} < \frac{6}{5}$ is ascending form.

c. $6\frac{2}{7}, 3\frac{1}{7}, 5\frac{5}{7}, 2\frac{4}{7}$

$\frac{44}{7}, \frac{22}{7}, \frac{40}{7}, \frac{18}{7}$

Since $18 < 22 < 40 < 44$

So, ascending order is $2\frac{4}{7} < 3\frac{1}{7} < 5\frac{5}{7} < 6\frac{2}{7}$

d. $7\frac{3}{11}$, $\frac{8}{13}$, $2\frac{5}{13}$, $\frac{9}{11}$

$\frac{80}{11}$, $\frac{8}{13}$, $\frac{31}{13}$, $\frac{9}{11}$

11	11, 13, 13, 11
13	1, 13, 13, 1
	1, 1, 1, 1

LCM of 11, 13, 13, 11
$= 11 \times 13 = 143$
Now, by doing same denominator, we have

$\frac{80}{11} = \frac{80 \times 13}{11 \times 13} = \frac{1040}{143}$ $\quad \frac{8}{13} = \frac{8 \times 11}{13 \times 11} = \frac{88}{143}$

$\frac{31}{13} = \frac{31 \times 11}{13 \times 11} = \frac{341}{143}$ $\quad \frac{9}{11} = \frac{9 \times 13}{11 \times 13} = \frac{117}{143}$

Since, $88 < 117 < 341 < 1040$

So, ascending order is $\frac{8}{13} < \frac{9}{11} < \frac{31}{13} < \frac{80}{11}$

or $\frac{8}{13} < \frac{9}{11} < 2\frac{5}{13} < 7\frac{3}{11}$ form.

e. $7\frac{8}{6}$, $7\frac{15}{19}$, $7\frac{13}{19}$, $8\frac{5}{6}$

$\frac{50}{6}$, $\frac{148}{19}$, $\frac{146}{19}$, $\frac{53}{6}$

6	6, 19, 19, 6
19	1, 19, 19, 1
	1, 1, 1, 1

LCM of 6, 19, 19, 6
$= 6 \times 19 = 114$
Now, by doing same denominator, we have

$\frac{50}{6} = \frac{50 \times 19}{6 \times 19} = \frac{950}{114}$ $\quad \frac{148}{19} = \frac{148 \times 6}{19 \times 6} = \frac{888}{114}$

$\frac{146}{19} = \frac{146 \times 6}{19 \times 6} = \frac{876}{114}$ $\quad \frac{53}{6} = \frac{53 \times 19}{6 \times 19} = \frac{1007}{114}$

Since, $876 < 888 < 950 < 1007$

So, ascending order is $\frac{146}{19} < \frac{148}{19} < \frac{50}{6} < \frac{53}{6}$

or $7\frac{13}{19} < 7\frac{15}{19} < 7\frac{8}{6} < 8\frac{5}{6}$ form.

f. $2\frac{6}{15}, 4\frac{11}{15}, 7\frac{12}{5}, 7\frac{3}{5}$

$\frac{36}{15}, \frac{71}{15}, \frac{47}{5}, \frac{38}{5}$

5	15, 15, 5, 5
3	3, 3, 1, 1,
	1, 1, 1, 1

LCM of 15, 15, 5, 5

$= 5 \times 3 = 15$

Now, by doing same denominator, we have

$\frac{36}{15} = \frac{36 \times 1}{15 \times 1} = \frac{36}{15}$; $\frac{71}{15} = \frac{71 \times 1}{15 \times 1} = \frac{71}{15}$

$\frac{47}{5} = \frac{47 \times 3}{5 \times 3} = \frac{141}{15}$; $\frac{38}{5} = \frac{38 \times 3}{5 \times 3} = \frac{114}{15}$

Since, $36 < 71 < 114 < 141$

So, ascending order is $\frac{36}{15} < \frac{71}{15} < \frac{38}{5} < \frac{47}{5}$

or $2\frac{6}{15} < 4\frac{11}{15} < 7\frac{3}{5} < 7\frac{12}{5}$ form.

4. Arrange in descending order :

Ans. a. $\frac{1}{9}, \frac{2}{9}, \frac{7}{9}, \frac{5}{9}$

These are like fractions.

Since, $7 > 5 > 2 > 1$

So, descending order is $\frac{7}{9} > \frac{5}{9} > \frac{2}{9} > \frac{1}{9}$

b. $\frac{8}{13}, \frac{12}{13}, \frac{11}{13}, \frac{6}{13}$

These are like fractions.

Since, $12 > 11 > 8 > 6$

So, descending order is $\frac{12}{13} > \frac{11}{13} > \frac{8}{13} > \frac{6}{13}$

c. $\frac{3}{11}, \frac{4}{9}, \frac{1}{9}, \frac{2}{11}$

LCM of 11, 9, 9, 11 $= 11 \times 3 \times 3 = 99$

3	11, 9, 9, 11
3	11, 3, 3, 11
11	11, 1, 1, 11
	1, 1, 1, 1

Now, by doing denominator same.

$\frac{3}{11} = \frac{3 \times 9}{11 \times 9} = \frac{27}{99}$ $\quad$ $\frac{4}{9} = \frac{4 \times 11}{9 \times 11} = \frac{44}{99}$

$\frac{1}{9} = \frac{1 \times 11}{9 \times 11} = \frac{11}{99}$ $\quad$ $\frac{2}{11} = \frac{2 \times 9}{11 \times 9} = \frac{18}{99}$

Since, $44 > 27 > 18 > 11$

So, descending order $= \frac{44}{99} > \frac{27}{99} > \frac{18}{99} > \frac{11}{99}$ or

$\frac{4}{9} > \frac{3}{11} > \frac{2}{11} > \frac{1}{9}$

Exercise 7 (d)

1. Find the sum :

Ans. a. $\mathbf{2\frac{5}{9} + 3\frac{3}{9}}$

$= \frac{23}{9} + \frac{30}{9} = \frac{23 + 30}{9} = \frac{53}{9}$

b. $\mathbf{\frac{1}{12} + \frac{7}{12}}$

$= \frac{1 + 7}{12} = \frac{8}{12} = \frac{2}{3}$

c. $\mathbf{\frac{13}{19} + \frac{5}{19}}$

$= \frac{13 + 5}{19} = \frac{18}{19}$

d. $\mathbf{\frac{5}{21} + \frac{10}{21}}$

$= \frac{5 + 10}{21} = \frac{15}{21} = \frac{5}{7}$

e. $\mathbf{\frac{1}{10} + \frac{3}{10} + \frac{2}{10}}$

$= \frac{1 + 3 + 2}{10} = \frac{6}{10} = \frac{3}{5}$

f. $\mathbf{\frac{5}{14} + \frac{7}{14} + \frac{1}{14}}$

$= \frac{5 + 7 + 1}{14} = \frac{13}{14}$

g. $\mathbf{\frac{3}{7} + \frac{6}{7} + \frac{2}{7}}$

$= \frac{3 + 6 + 2}{7} = \frac{11}{7}$

h. $\mathbf{\frac{7}{24} + \frac{5}{24} + \frac{6}{24}}$

$= \frac{7 + 5 + 6}{24} = \frac{18}{24} = \frac{3}{4}$

2. Subtract :

Ans. a. $\frac{3}{11} - \frac{2}{11}$

$= \frac{3-2}{11} = \frac{1}{11}$

b. $\frac{8}{18} - \frac{3}{18}$

$= \frac{8-3}{18} = \frac{5}{18}$

c. $\frac{17}{15} - \frac{13}{15}$

$= \frac{17-13}{15} = \frac{4}{15}$

d. $\frac{16}{31} - \frac{12}{31}$

$= \frac{16-12}{31} = \frac{4}{31}$

e. $3\frac{3}{5} - 1\frac{4}{5}$

$= \frac{18}{5} - \frac{9}{5} = \frac{18-9}{5} = \frac{9}{5}$

f. $1\frac{8}{10} - 1\frac{1}{10}$

$= \frac{18}{10} - \frac{11}{10} = \frac{18-11}{10} = \frac{7}{10}$

g. $3\frac{4}{5} - 1\frac{2}{5}$

$= \frac{19}{5} - \frac{7}{5} = \frac{19-7}{5} = \frac{12}{5} = 2\frac{2}{5}$

h. $2\frac{5}{4} - \frac{1}{4}$

$= \frac{13}{4} - \frac{1}{4} = \frac{13-1}{4} = \frac{12}{4} = 3$

Exercise 7 (e)

1. Add the following :

Ans. a. $\frac{1}{4} + \frac{4}{9}$

$= \frac{9+4\times4}{36} = \frac{9+16}{36} = \frac{25}{36}$

b. $\frac{1}{9} + \frac{1}{8}$

$= \frac{8+9}{72} = \frac{17}{72}$

c. $\frac{4}{5} + \frac{1}{2}$

$= \frac{4 \times 2 + 5}{10} = \frac{8+5}{10} = \frac{13}{10} = 1\frac{3}{10}$

d. $\frac{1}{3} + \frac{1}{6}$

$= \frac{6+3}{18} = \frac{9}{18} = \frac{1}{2}$

e. $2\frac{1}{7} + 7\frac{1}{2}$

$= \frac{15}{7} + \frac{15}{2} = \frac{15 \times 2 + 15 \times 7}{14} = \frac{30+105}{14} = \frac{135}{14} = 9\frac{9}{14}$

f. $4\frac{1}{5} + 4\frac{1}{3}$

$= \frac{21}{5} + \frac{13}{3} = \frac{21 \times 3 + 13 \times 5}{15} = \frac{63+65}{15} = \frac{128}{15} = 8\frac{8}{15}$

g. $4\frac{1}{6} + 2\frac{1}{4}$

$= \frac{25}{6} + \frac{9}{4} = \frac{25 \times 4 + 9 \times 6}{24} = \frac{100+54}{24} = \frac{154}{24} = \frac{77}{12} = 6\frac{5}{12}$

h. $1\frac{2}{3} + 6\frac{1}{2}$

$= \frac{5}{3} + \frac{13}{2} = \frac{5 \times 2 + 13 \times 3}{6} = \frac{10+39}{6} = \frac{49}{6} = 8\frac{1}{6}$

2. Subtract the following :

Ans. a. $\frac{1}{3} - \frac{2}{7}$

$= \frac{7 - 2 \times 3}{21} = \frac{7-6}{21} = \frac{1}{21}$

b. $\frac{2}{3} - \frac{4}{8}$

$= \frac{2 \times 8 - 3 \times 4}{24} = \frac{16-12}{24} = \frac{4}{24} = \frac{1}{6}$

c. $\frac{5}{7} - \frac{1}{4}$

$= \frac{20-7}{28} = \frac{13}{28}$

d. $\frac{1}{2} - \frac{1}{6}$

$= \frac{6-2}{12} = \frac{4}{12} = \frac{1}{3}$

e. $10\frac{1}{3} - 7\frac{4}{6}$

$= \frac{31}{3} - \frac{46}{6} = \frac{31 \times 2 - 46 \times 1}{6} = \frac{62-46}{6} = \frac{16}{6} = \frac{8}{3} = 2\frac{2}{3}$

f. $9\frac{1}{2} - 8\frac{3}{5}$

$= \frac{19}{2} - \frac{43}{5} = \frac{19 \times 5 - 43 \times 2}{10} = \frac{95-86}{10} = \frac{9}{10}$

g. $6\frac{1}{2} - 3\frac{2}{5}$

$= \frac{13}{2} - \frac{17}{5} = \frac{13 \times 5 - 17 \times 2}{10} = \frac{65-34}{10} = \frac{31}{10} = 3\frac{1}{10}$

h. $3\frac{1}{2} - 1\frac{3}{4}$

$= \frac{7}{2} - \frac{7}{4} = \frac{7 \times 2 - 7 \times 1}{4} = \frac{14-7}{4} = \frac{7}{4} = 1\frac{3}{4}$

Exercise 7 (f)

1. Milk in I vessels $= \frac{1}{4}$ litre

Milk in II vessels $= \frac{3}{8}$ litre

Milk in III vessels $= \frac{9}{16}$ litre

$\therefore$ Total milk in three vessels $= \left(\frac{1}{4} + \frac{3}{8} + \frac{9}{16}\right)$ litre

$= \left(\frac{1 \times 4 + 3 \times 2 + 9 \times 1}{16}\right)$ litre

$= \left(\frac{4+6+9}{16}\right) = \frac{19}{16}$ L $= 1\frac{3}{16}$ L

2. Mrs kumar bought sugar $= \frac{3}{4}$ kg

She used sugar $= \frac{1}{4}$ kg

$\therefore$ Sugar left over $= \frac{3}{4}$ kg $- \frac{1}{4}$ kg

$= \frac{3-1}{4}$ kg $= \frac{2}{4}$ kg $= \frac{1}{2}$ kg

3. John bought ribbon $= \frac{2}{5}$ m

Jack bought ribbon $= \frac{1}{5}$ m

Since, $\frac{2}{5} > \frac{1}{5}$

So, John bought longer ribbon by $= \frac{2}{5} - \frac{1}{5} = \frac{2-1}{5} = \frac{1}{5}$ m

So, John bought $\frac{1}{5}$ m longer ribbon than Jack.

4. Nishant spent on foot $= \frac{1}{3}$

He spent on dresses $= \frac{1}{3}$

So, total fraction he spent $= \frac{1}{3} + \frac{1}{3}$

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

5. Kriti completed her English homework in $= \frac{1}{5}$ hrs

Kriti completed her Mathematics homework in $= \frac{3}{5}$ hrs

Total time taken by her $= \frac{1}{5} + \frac{3}{5} = \frac{1+3}{5} = \frac{4}{5}$ hrs

6. Ritika travelled by car $= \frac{2}{3}$

Ritika travelled by train $= \frac{1}{3}$

More distance travelled by Ritika in car $= \frac{2}{3} - \frac{1}{3}$

So, Ritika travelled by car more than travel by train $= \frac{2-1}{3} = \frac{1}{3}$

Multiple Choice Questions (MCQs)

Choose the correct option.

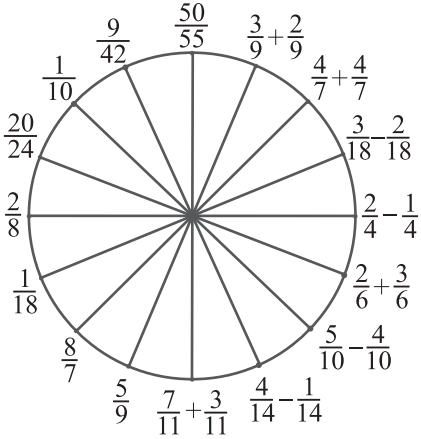
Ans. 1. a 2. c 3. a 4. a

NEP

Communication

Solve the problems. Then connect the dot beside each problem to the beside its answer. Some of the answers are in equivalent fraction. One line has been drawn for you.

Ans.

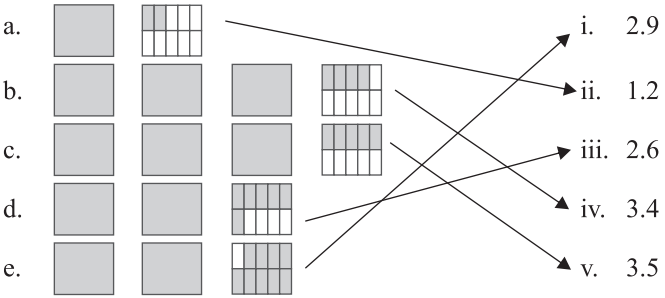


Chapter

8 Decimals

Let's Recall

Match the following :



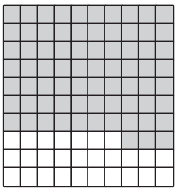
Exercise 8 (a)

1. Write the decimal fraction for the following :

Ans. a. 0.33 b. 1.00 c. 1.32

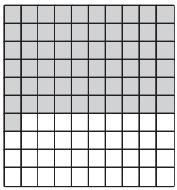
2. Shade the squares to represent the given decimal fractions :

Ans. a.



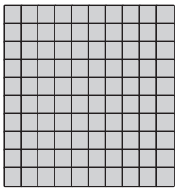
0.73

b.



0.61

c.



1.00

3. Write the following decimals in words :

Ans. a. Eight point six four b. One point six five

c. Zero point zero zero four

d. Nineteen point one zero three e. Zero point one four

f. Three hundred eighty-four point one eight five

4. Write the numerals :

Ans. a. 2.3 b. 5.38 c. 1.63 d. 45.35

5. Write in expanded form :

Ans. a. **19.45** = $10 + 9 + \frac{4}{10} + \frac{5}{100}$

b. **1.085** = $1 + \frac{8}{100} + \frac{5}{1000}$

c. **92.105** = $90 + 2 + \frac{1}{10} + \frac{5}{1000}$

d. **651.075** = $600 + 50 + 1 + \frac{7}{100} + \frac{5}{1000}$

e. **8.001** = $8 + \frac{1}{1000}$

f. **62.62** = $60 + 2 + \frac{6}{10} + \frac{2}{100}$

g. **101.256** = $100 + 1 + \frac{2}{10} + \frac{5}{100} + \frac{6}{1000}$

h. **111.207** = $100 + 10 + 1 + \frac{2}{10} + \frac{7}{1000}$

6. Write as a decimal number :

Ans. a. 4.7 b. 5.08 c. 6.009
d. 77.07 e. 42.4 f. 56.007
g. 53.6 h. 913.007 i. 67.097

Exercise 8 (b)

1. Convert the following decimal numbers to fractions.

Ans. a. **0.87** = $\frac{87}{100}$

b. **0.775** = $\frac{775}{1000} = \frac{31}{40}$

c. **0.005** = $\frac{5}{1000} = \frac{1}{200}$

d. **21.005** = $\frac{21005}{1000} = \frac{4201}{200}$

e. **8.95** = $\frac{895}{100} = \frac{179}{20}$

f. **34.025** = $\frac{34025}{1000} = \frac{1361}{40}$

g. **1.09** $= \frac{109}{100}$

h. **2.601** $= \frac{2601}{1000}$

2. Convert the following fractions as decimals.

Ans. a. 0.6 b. 0.9 c. 0.83 d. 0.003
e. 3.2 f. 7.804 g. 3.4 h. 2.9

Higher order Thinking Skills (HOTS)

Match the fractions and the decimals by colouring alike. Remember that the fractions are in their lowest terms.

Ans.

G	Y		W	B	O	R	
0.50	0.25		0.40	0.75	0.66	0.08	
$\frac{2}{25}$		$\frac{3}{4}$	$\frac{1}{2}$		$\frac{33}{50}$	$\frac{1}{4}$	$\frac{2}{5}$
R		B	G		O	Y	W

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. a 3. c 4. c

Chapter 9

Geometry

Lets' Recall

1. Identify the point, line segment and ray.

Ans. a. Line segment b. Line
c. Point d. Ray

Exercise 9 (a)

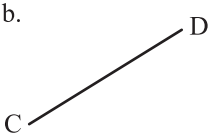
1. Which of these represent a ray, a line segment and a line? Write down in symbols.

Ans. a. Line segment $\overline{QP}$ b. Ray $\overrightarrow{LO}$ c. Line $\overleftrightarrow{AB}$
d. Line $\overleftrightarrow{AB}$ e. Ray $\overrightarrow{AB}$ f. Line $\overleftrightarrow{LD}$

2. Observe the pictures carefully. Write the name of the following lines :

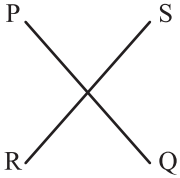
Ans. a.

b.



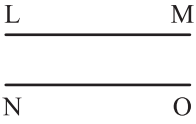
c.

d.



e.

f.



3. Measure the following line segments.

Ans. Do it yourself.

4. Draw the line segments of the following lengths.

Ans. Do it yourself.

Exercise 9 (b)

1. Name the angles.

Ans. a. ∠ABC b. ∠LMN c. ∠RST
d. ∠PQR e. ∠ABC f. ∠PQR

2. Name the arms and vertex of the given angles.

Ans. a. Arms CB, CD b. Arms OA, OB
Vertex C Vertex O

3. In the figure.

Ans. a. B b. G, D c. L, P

Exercise 9 (c)

1. Put a tick (✓) for the closed figure and (✗) for open figure.

Ans. a. ✓ b. ✓ c. ✓ d. ✗ e. ✗ f. ✓

2. Identify and colour the polygons among the following.

Ans. a.

b.

c.

d.

e.

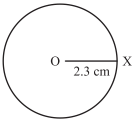
Exercise 9 (d)

1. In the given circle, write names of :

Ans. a. O
b. OA, OX, OY
c. XY
d. PQ, XY

2. Calculate radius for the given diameter in each case and draw circle also :

Ans. a. **d = 4.6 cm**

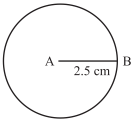


$r = \frac{d}{2}$

$= \frac{4.6}{2}$

$= 2.3$ cm

b. **d = 5 cm**

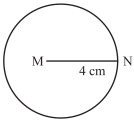


$r = \frac{d}{2}$

$= \frac{5}{2}$

$= 2.5$ cm

c. **d = 8 cm**

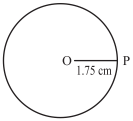


$r = \frac{d}{2}$

$= \frac{8}{2}$

$= 4$ cm

d. **d = $3\frac{1}{2}$ cm**

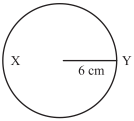


$r = \frac{d}{2}$

$r = \frac{7/2}{2}$

$r = \frac{7}{4}$ cm $= 1.75$ cm

e. **d = 12 cm**

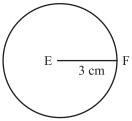


$r = \frac{d}{2}$

$= \frac{12}{2}$

$= 6$ cm

f. **d = 6 cm**



$r = \frac{d}{2}$

$= \frac{6}{2}$

$= 3$ cm

3. Draw a circle for each of the following radius in your notebook and measure the diameter :

Ans. a. **r = 2 cm**
$d = 2 \times r$
$d = 2 \times 2$ cm
$d = 4$ cm

b. **r = 4 cm**
$d = 2 \times r$
$d = 2 \times 4$ cm
$d = 8$ cm

c. **r = 2.5 cm**
$d = 2 \times r$
$d = 2 \times 2.5$
$d = 5.0$ cm

d. **r = 5 cm**
d = 2 × r
d = 2 × 5 cm
d = 10 cm

e. **r = 5.5 cm**
d = 2 × r
d = 2 × 5.5 cm
d = 11 cm

f. **r = 3.5 cm**
d = 2 × r
d = 2 × 3.5
d = 7.0 cm

4. Write T for True and F for False :

Ans. a. True b. False c. True d. True

NEP Creative Thinking

In the given figure, name the following angles using three letters.

∠1 : **∠AOB** ∠2 : **∠DOC** ∠3 : **∠EOF**

∠4 : **∠BOC** ∠5 : **∠DOE** ∠6 : **∠AOF**

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. c 3. a 4. a

Chapter

10 Symmetry and Patterns

Looking Back

Tick (✓) the correct shape which you will get after completing the halves :

Ans. a. i. ii. iii. ✓

b. i. ii. ✓ iii.

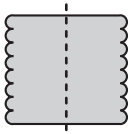
Exercise 10 (a)

1. Tick (✓) the objects that are symmetrical.

Ans. a. b. c. ✓ ✓

d.  e.  f. 

2. Draw the line of symmetry in the following figures.

Ans. a.  b.  c. 

d.  e.  f. 

3. Complete the figures along their line of symmetry.

Ans. Do it yourself.

Exercise 10 (b)

1. Mark a tick for the figures that are examples of reflections :

Ans. a.  b.  c. 

d.  e.  f. 

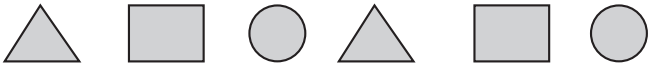
2. Draw the figures whose reflections are given below.

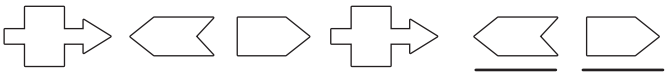
Ans. a.  b.  c. 

d.  e.  f. 

Exercise 10 (c)

1. Complete the patterns.

Ans. a. 

b. 

c. 

d. 

2. Write the next three terms in each patterns.

Ans. a. A1, B2, C3, D4, **E5**, **F6**, **G7**; What will be the last term? **Z26**

b. 99, 89, 79, 69, **59**, **49**, **39**

c. 13, 25, 37, 49, **61**, **73**, **85**

d. 16, 14, 12, 10, **8**, **6**, **4**

3. Observe the patterns and fill in the blanks.

Ans. a. $(2 \times 2) - (1 \times 1) = 2 + 1$
$(3 \times 3) - (2 \times 2) = 3 + 2$
$(4 \times 4) - (3 \times 3) = 4 + 3$
$(5 \times 5) - (4 \times 4) = \mathbf{5 + 4}$
$(6 \times 6) - (5 \times 5) = \mathbf{6 + 5}$
$(7 \times 7) - (6 \times 6) = \mathbf{7 + 6}$

b. $15873 \times 7 \times 1 = 111111$
$15873 \times 7 \times 2 = \mathbf{222222}$
$15873 \times 7 \times 3 = 333333$
$15873 \times 7 \times 4 = 444444$
$15873 \times 7 \times 5 = \mathbf{555555}$
$\mathbf{15873} \times 7 \times 6 = 666666$

4. The rules for these patterns consist of two steps-work them out and write the next three terms.

Ans. a. 1, 4, 13, 40, **121**, **364**, **1093** (Hint : The rule is × 3 + 1)

b. 2,3, 5, 9 **17**, **33**, **65** (Hint : The rule is × 2 – 1)

c. 0, 3, 12, 39, **120**, **363**, **1092** (Hint : Add 1 and then multiply by a number)

d. 1, 2, 5, 14, **41**, **122**, **365** (Hint : Multiply by 3 and then subtract a number)

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. b 3. a

Use the following codes to decode the message and find what Mohit want to say his friend Gautam.

Ans.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Z	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A

Dear Gautam
DV DROO NVVG ZG UREV
L XOLXP RM GSV KZIP.
WE WILL MEET AT FIVE
O'CLOCK IN THE PARK.

Chapter
11 Metric Measures

Looking Back

Guess and match the columns :

Ans.

	Column A	Column B
a.		i. 100 kg
b.		ii. 1500 kg
c.		iii. 5 g
d.		iv. 100 g
e.		v. 250 g

Exercise 11 (a)

1. Convert into centimetres :

Ans. a. **7 m**
= 7 × 100 cm
= 700 cm

b. **12 m**
= 12 × 100 cm
= 1200 cm

c. **3 m 14 cm**
= 3 × 100 cm + 14 cm
= (300 + 14) cm
= 314 cm

d. **7 m 50 cm**
= (7 × 100 + 50) cm
= (700 + 50) cm
= 750 cm

e. **8 m 8 cm**
= 8 × 100 cm + 8 cm
= (800 + 8) cm
= 808 cm

f. **2 m 22 cm**
= 2 × 100 cm + 22 cm
= (200 + 22) cm
= 222 cm

g. **7 m 75 cm**
= 7 × 100 cm + 75 cm
= (700 + 75) cm
= 775 cm

h. **2 m 14 cm**
= 2 × 100 cm + 14 cm
= (200 + 14) cm
= 214 cm

2. Convert into metres and centimetres :

Ans. a. **425 cm**
= (400 + 25) cm
= 400 cm + 25 cm
= 4 m 25 cm

b. **920 cm**
= (900 + 20) cm
= 900 cm + 20 cm
= 9 m 20 cm

c. **412 cm**
= (400 + 12) cm
= 400 cm + 12 cm
= 4 m 12 cm

d. **501 cm**
= (500 + 1) cm
= 500 cm + 1 cm
= 5 m 1 cm

e. **385 cm**
= (300 + 85) cm
= 300 cm + 85 cm
= 3 m 85 cm

f. **4005 cm**
= (4000 + 5) cm
= 4000 cm + 5 cm
= 40 m 5 cm

g. **810 cm**
= (800 + 10) cm
= 800 cm + 10 cm
= 8 m 10 cm

h. **705 cm**
= (700 + 5) cm
= 700 cm + 5 cm
= 7 m 5 cm

3. Convert into metres :

Ans. a. **9 km**
= 9 × 1000 m
= 9000 m

b. **13 km**
= 13 × 1000 m
= 13000 m

c. **8 km 705 m**
= (8×1000 + 705) m
= (8000 + 705) m
= 8705 m

d. **$3\frac{1}{2}$ km**

$= \frac{7}{2}$ km

$= \frac{7}{2} \times 1000$ m

$= 7 \times 500$ m

$= 3500$ m

e. **6 km 295 m**

$= (6 \times 1000 + 295)$ m

$= (6000 + 295)$ m

$= 6295$ m

f. **7 km 125 m**

$= (7 \times 1000 + 125)$ m

$= (7000 + 125)$ m

$= 7125$ m

g. **9 km 25 m**

$= (9 \times 1000 + 25)$ m

$= (9000 + 25)$ m

$= 9025$ m

h. **$7\frac{1}{2}$ km**

$= \frac{15}{2}$ km

$= \frac{15}{2} \times 1000$ m

$= 15 \times 500$ m

$= 7500$ m

4. Convert into kilometres and metres :

Ans. a. **6175 m**

$= (6000 + 175)$ m

$= 6000$ m $+ 175$ m

$= 6$ km 175 m

b. **8000 m**

$= (8000 \div 1000)$ m

$= 8$ m

c. **2950 m**

$= (2000 + 950)$ m

$= 2000$ m $+ 950$ m

$= 2$ km 950 m

d. **1805 m**

$= (1000 + 805)$ m

$= 1000$ m $+ 805$ m

$= 1$ km 805 m

e. **8050 m**

$= (8000 + 50)$ m

$= 8000$ m $+ 50$ m

$= 8$ km 50 m

f. **4246 m**

$= (4000 + 246)$ m

$= 4000$ m $+ 246$ m

$= 4$ km 246 m

g. **1084 m**

$= (1000 + 84)$ m

h. **7025 m**

$= (7000 + 25)$ m

= 1000 m + 84 m
= 1 km 84 m

= 7000 m + 25 m
= 7 km 25 m

Exercise 11 (b)

1. Convert the following into g :

Ans. a. **9 kg 279 g**
= 9 × 1000 g + 279 g
= 9000 g + 279 g
= 9279 g

b. **4 kg 15 g**
= 4 × 1000 g + 15 g
= 4000 g + 15 g
= 4015 g

c. **11 kg 9 g**
= 11 × 1000 g + 9 g
= 11000 g + 9 g
= 11009 g

d. **6 kg 75 g**
= 6 × 1000 g + 75 g
= 6000 g + 75 g
= 6075 g

2. Convert the following into mg :

Ans. a. **6 g 732 mg**
= 6 × 1000 mg + 732 mg
= 6000 mg + 732 mg
= 6732 mg

b. **3 g 58 mg**
= 3 × 1000 mg + 58 mg
= 3000 mg + 58 mg
= 3058 mg

c. **1 g 9 mg**
= 1 × 1000 mg + 9 mg
= 1000 mg + 9 mg
= 1009 mg

d. **3 g 408 mg**
= 3 × 1000 mg + 408 mg
= 3000 mg + 408 mg
= 3408 mg

3. Convert the following into kg :

Ans. a. **8080 g**
= 8000 g + 80 g
= 8 kg 80 g

b. **8008 g**
= 8000 g + 8 g
= 8 kg 8 g

c. **2075 g**
= 2000 g + 75 g
= 2 kg 75 g

d. **77008 g**
= 77000 g + 8 g
= 77 kg 8 g

4. Convert the following into g :

Ans. a. **7288 mg**
= 7000 mg + 288 mg
= 7 g 288 mg

b. **6018 mg**
= 6000 mg + 18 mg
= 6 g 18 mg

c. **27055 mg**
= 27000 mg + 55 mg
= 27 g 55 mg

d. **19265 mg**
= 19000 mg + 265 mg
= 19 g 265 mg

Exercise 11 (c)

1. Convert into L.

Ans. a. **6 kL**
= 6 × 1000 L
= 6000 L

b. **15 kL**
= 15 × 1000 L
= 15000 L

c. **7 kL 265 L**
= 7 × 1000 L + 265 L
= 7000 L + 265 L
= 7265 L

d. **8 kL 8 L**
= 8 × 1000 L + 8 L
= 8000 L + 8 L
= 8008 L

e. **25 kL 70 L**
= 25 × 1000 L + 70 L
= 25000 L + 70 L
= 25070 L

f. **4 kL 70 L**
= 4 × 1000 L + 70 L
= 4000 L + 70 L
= 4070 L

g. **18 kL 1 L**
= 18 × 1000 L + 1 L
= 18000 L + 1 L
= 18001 L

h. **6 kL90 L**
= 6 × 1000 L + 90 L
= 6000 L + 90 L
= 6090 L

2. Convert into mL.

Ans. a. **6 L**
= 6 × 1000 mL
= 6000 mL

b. **17 L**
= 17 × 1000 mL
= 17000 mL

c. **10 L 450 mL**
= 10 × 1000 mL + 450 mL
= 10000 mL + 450 mL
= 10450 mL

d. **2 L 970 mL**
= 2 × 1000 mL + 970 mL
= 2000 mL + 970 mL
= 2970 mL

e. **7 L 270 mL**
= 7 × 1000 mL + 270 mL
= 7000 mL + 270 mL
= 7270 mL

f. **3 L 15 mL**
= 3 × 1000 mL + 15 mL
= 3000 mL + 15 mL
= 3015 mL

g. **1 L 4 mL**
= 1 × 1000 mL + 4 mL
= 1000 mL + 4 mL
= 1004 mL

h. **15 L 55 mL**
= 15 × 1000 mL + 55 mL
= 15000 mL + 55 mL
= 15055 mL

3. Convert into kL.

Ans. a. **62000 L**

$= \frac{62000}{1000}$ kL

= 62 kL

b. **7280 L**

= 7000 L + 280 L

= 7 kL 280 L

c. **15255 L**

= 15000 L + 255 L

= 15 kL 255 L

Exercise 11 (d)

1. Add the following :

Ans. a.

km	m
42	175
+ 69	675
111	850

b.

m	cm
15	25
+ 8	65
23	90

c.

kg	g
75	250
+ 62	127
137	377

d.

kg	g
54	672
+ 67	372
122	44

e.

g	mg
8	030
19	705
+ 30	475
58	210

f.

L	mL
8	455
+ 16	285
24	740

g.

L	mL
33	333
+ 66	666
99	999

h.

m	cm
18	30
	16
+ 5	10
23	56

2. Subtract :

Ans. a.

m	cm
92	66
– 88	46
4	20

b.

km	m
72	700
– 66	825
5	875

c.

kg	g
32	100
– 17	400
14	700

d.

kg	g
81	350
– 73	450
7	900

e.

g	mg
38	400
– 27	875
10	525

f.

L	mL
88	672
– 74	900
13	772

g.

L	mL
10	250
– 5	650
4	600

h.

km	m
40	000
– 35	675
4	325

Exercise 11 (e)

Solve the following :

Ans. 1. Orange squash = 12 L 250 mL
Lemon squash = 16 L 300 mL
Pineapple squash = + 10 L 000 mL
Total quality of squash = **38 L 550 mL**

So, total 38 L 550 mL squash were made by Nisha's Mother.

2. Weight of potatoes = 2 kg 400 g
Weight of tomatoes = + 1 kg 550 g
Total weight of vegetables = **3 kg 950 g**

So, Mrs. Ali bought total 3 kg, 950 g vegetables.

3. Juice in a pack = 2 L 500 mL
Komal drank Juice = – 750 mL
Juice left in the pack = **1 L 750 mL**

So, There is 1 L 750 mL of Juice left in the pack.

4. Length of red ribbon = 30 m 50 cm
Gautami used ribbon = – 18 m 75 cm
Left ribbon = **11 m 75 cm**

So, 11m 75cm length of the ribbon is left.

5. Shopkeeper bought mangoes = 9 kg 500 g
He sold mangoes = – 4 kg 750 g
left mangoes = **4 kg 750 g**

So, 4 kg 750 g mangoes left with him.

6. Mr. Kumar travelld by car = 5 km 250 m
Mr. Kumar travelld by bus = 3 km 450 m
Mr. Kumar travelld by walk = + 600 m
Total distance travelled by Mr. Kumar = **9 km 300 m**

So, travelled 9 km 300 m in all.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. a 3. c 4. a

NEP Collaboration

Complete in the cross number puzzle using the conversion rules :

Ans.

[1] 3	2						
0		[2] 4					
	[3] 6	3					
[4] 7		8					
[5] 2	7						
0		[6] 3					
	[7] 4	6	1		[8] 9	[9] 5	
[10] 8		2		[11] 7		2	
[12] 8	9		[13] 4	2	5		

Chapter

12 Time and Calendar

Looking Back

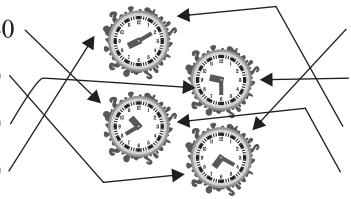
1. Fill in the blanks. Choose from the box. You will have to use some of the words more than once. How long will it take for

Ans. a. Months b. Hours c. Minutes d. Days e. Minutes

2. Match the columns :

Ans.

a. 10 : 40	i. 20 minutes past 7
b. 7 : 20	ii. half past 9
c. 9 : 30	iii. 10 minutes past 8
d. 8 : 10	iv. 20 minutes to 11



Exercise 12 (a)

1. Read and write the time in two ways :

Ans. a. 10 : 11
11 minutes past 10

b. 4 : 50
10 minutes to 5

c. 9 : 36
24 minutes to 10

d. 10 : 22
22 minutes past 10

e. 6 : 17
17 minutes past 6

2. Draw the hands of the clocks to show the given time :

Ans. a.

3 : 24

b.

9 : 08

c.

10 : 49

3. Write the time 2 hours before :

Ans. a. 4 : 18 a.m. b. 1 : 02 p.m. c. 5 : 47 a.m.
d. 7 : 30 p.m. e. 3 : 25 a.m. f. 6 : 08 a.m.

4. Give the time 3 hours after :

Ans. a. 8 : 40 a.m. b. 9 : 30 p.m. c. 2 : 00 a.m.
d. 3 : 04 p.m. e. 11 : 15 a.m. f. 12 : 00 p.m.

Exercise 12 (b)

1. Change the 12-hour clock time to 24-hour clock time :

Ans. a. **10 : 00 a.m.**
= 1000 hours

b. **8 : 20 p.m.**
= 820 + 1200
= 2020 hours

c. **11 : 00 a.m.**
= 1100 hours

d. **2 : 47 p.m.**
= 247 + 1200
= 1447 hours

e. **12 midnight**
= 1200 hours + 1200 hours
= 2400 hours or 0000 hours

f. **8 : 45 a.m.**
= 0845 hours

g. **3 : 15 a.m.**
= 0315 hours

h. **1 : 05 p,m.**
= 105 + 1200
= 1305 hours

2. Change the 24-hour clock time to 12-hour clock time :

Ans. a. **1115 hours**
= 11 : 15 a.m.

b. **0800 hours**
= 8 : 00 a.m.

c. **1640 hours**
= 1640 – 1200
= 440
= 4 : 40 p.m.

d. **2250 hours**
= 2250 – 1200
= 1050
= 10 : 50 p.m.

e. **1200 hours**
= 12 : 00 noon

f. **2340 hours**
= 2340 – 1200
= 1140
= 11 : 40 p.m.

g. **1320 hours**
= 1320 – 1200
= 120 = 1 : 20 p.m.

h. **0430 hours**
= 4 : 30 a.m.

Exercise 12 (c)

1. Convert the following into minutes :

Ans. a. **8 hours**
= 8 × 60 minutes
= 480 minutes

b. **7 hours**
= 7 × 60 minutes
= 420 minutes

c. **5 hours 20 minutes**
= (5 × 60 + 20) minutes
= (300 + 20) minutes
= 320 minutes

d. **3 hours 25 minutes**
= (3 × 60 + 25) minutes
= (180 + 25) minutes
= 205 minutes

e. **15 hours 6 minutes**
= (15 × 60 + 6) minutes
= (900 + 6) minutes
= 906 minutes

f. **6 hours 14 minutes**
= (6 × 60 + 14) minutes
= (360 + 14) minutes
= 374 minutes

2. Convert the following into seconds :

Ans. a. **5 minutes**
= 5 × 60 Seconds
= 300 Seconds

b. **17 minutes**
= 17 × 60 Seconds
= 1020 Seconds

c. **24 minutes**
= 24 × 60 Seconds
= 1440 Seconds

d. **10 minutes 17 seconds**
= 10 × 60 Seconds + 17 Seconds
= 600 Seconds + 17 Seconds
= 617 Seconds

e. **36 minutes 48 seconds**
= 36 × 60 seconds + 48 Seconds
= (2160 + 48) Seconds
= 2208 Seconds

3. Convert the following into hours and minutes :

Ans. a. **325 minutes**

$= \frac{325}{60}$ hours

$= 5$ hours 25 minutes

$60\overline{)325}\,(5$ hours
-300
25 Minutes

b. **487 minutes**

$= \frac{487}{60}$ hours

$= 8$ hours 7 minutes

$60\overline{)487}\,(8$ hours
-480
7 Minutes

c. **156 minutes**

$= \frac{156}{60}$ hours

$= 2$ hours 36 minutes

$60\overline{)156}\,(2$ hours
-120
36 Minutes

d. **526 minutes**

$= \frac{526}{60}$ hours

$= 8$ hours 46 minutes

$60\overline{)526}\,(8$ hours
-480
46 Minutes

e. **1025 minutes**

$= \frac{1025}{60}$ hours

$= 17$ hours 05 minutes

$60\overline{)1025}\,(17$ Hours
$-60\downarrow$
425
-420
5 Minutes

f. **1515 minutes**

$= \frac{1515}{60}$ hours

$= 25$ hours 15 minutes

$60\overline{)1515}\,(25$ Hours
$-120\downarrow$
315
-300
15 Minutes

4. Convert the following into hours :

Ans. a. **10 days**
$= 10 \times 24$ hours
$= 240$ hours

b. **6 days**
$= 6 \times 24$ hours
$= 144$ hours

c. **5 days**
$= 5 \times 24$ hours
$= 120$ hours

d. **9 days 20 hours**
$= 9 \times 24$ hours $+ 20$ hours
$= 216$ hours $+ 20$ hours
$= 236$ hours

e. **10 days 10 hours**
$= 10 \times 24$ hours $+ 10$ hours
$= 240$ hours $+ 10$ hours
$= 250$ hours

f. **5 days 15 hours**

= 5 × 24 hours + 15 hours

= 120 hours + 15 hours = 135 hours

5. Convert the following into days and hours :

Ans. a. **120 hours**

$= \frac{120}{24}$ days

= 5 days

```
24) 1 2 0 (5 days
   - 1 2 0
   -------
       0
```

b. **560 hours**

$= \frac{560}{24}$ days

= 23 days 8 hours

```
24) 5 6 0 (23 days
   - 4 8 ↓
   -------
     8 0
   - 7 2
   -------
       8  hours
```

c. **225 hours**

$= \frac{225}{24}$ days

= 9 days 9 hours

```
24) 2 2 5 (9 days
   - 2 1 6
   -------
       9  hours
```

d. **96 hours**

$= \frac{96}{24}$ days

= 4 days

```
24) 9 6 (4 days
   - 9 6
   -------
       0  hours
```

e. **325 hours**

$= \frac{325}{24}$ days

= 13 days 13 hours

```
24) 3 2 5 (13 days
   - 2 4 ↓
   -------
     8 5
   - 7 2
   -------
     1 3  hours
```

f. **310 hours**

$= \frac{310}{24}$ days

= 12 days 22 hours

```
24) 3 1 0 (12 days
   - 2 4 ↓
   -------
     7 0
   - 4 8
   -------
     2 2  hours
```

Exercise 12 (d)

1. Add the following :

Ans. a.

hrs	min
3	15
+ 5	30
8 hrs	45 min

b.

hrs	min
7	40
+ 10	25
18 hrs	05 min

c.

hrs	min
2	20
+ 8	40
10 hrs	60 min

d.

hrs	min
19	25
+ 13	50
33 hrs	15 min

e.

hrs	min
12	45
+ 15	35
28 hrs	20 min

f.

hrs	min
16	00
+ 14	50
30 hrs	50 min

2. Subtract :

Ans. a.

hrs	min
10	10
– 6	25
3 hrs	45 min

b.

hrs	min
18	50
– 12	35
6 hrs	15 min

c.

hrs	min
7	45
– 4	20
3 hrs	25 min

d.

hrs	min
14	45
– 9	50
4 hrs	55 min

e.

hrs	min
21	40
– 13	55
7 hrs	45 min

f.

hrs	min
15	30
– 11	00
4 hrs	30 min

Exercise 12 (e)

1. Find the duration of time from :

Ans. a. **7 : 15 a.m. to 11 : 45 a.m.**

Starting time = 7 : 15 a.m.

Ending time = 11 : 45 a.m.

Duration of time = 11 : 45 – 7 : 15 a.m. = 4 : 30

or 4 hours 30 minutes.

H	Min
11	: 45
– 7	: 15
4	: 30

b. **1615 hours to 2030 hours**

Starting time = 1615 hours

Ending time = 2030 hours

Duration of time = (2030 – 1615) hours

= 415 hours

or 4 hours 15 minutes.

Hours
2030
– 1615
415

c. **1 : 15 p.m. to 2 : 00 p.m.**

Starting time = 1 : 15 p.m.
Ending time = 2 : 00 p.m.
Duration of time = 2 : 00 p.m. – 1 : 15 p.m.
= 0 : 45

or 45 minutes.

H	Min
1	60
2	00
– 1	15
0	45

d. **1230 hours to 0900 hours**

Starting time = 1230 hours
Ending time = 0900 hours or
2400 + 900 = 3300 hours
Duration of time = (3300 – 1230) hours = 2030 hours
or 20 hours 30 minutes.

3	2	60
3	3	00
– 1	2	30
2	0	30

e. **10 : 30 a.m. to 5 : 30 p.m.**

Starting time = 10 : 30 a.m.
or 10 : 30 hours
Ending time = 5 : 30 p.m.
or 17 : 30 hours
Duration of time = 17 : 30 – 10 : 30 = 7 : 00
7 hours

H	Min
17	30
– 10	30
7	00

2. Solve the following :

Ans. a. A vendor starts his rounds at = 10 : 20 a.m.
He returns at = 2 : 50 p.m.
He takes time = 2 : 50 p.m. – 10 : 20 a.m.
= 1450 hours – 1020 hours
= 430 hours

or 4 hours 30 minutes.

b. Rajdhani Express reached mumbai at = 9 : 30 a.m.
The Howrah mail had reached mumbai 3 hours 45 min before
So it reached mumbai = 9 : 30 – 3 hours 45 minutes
= 5 : 45 a.m.

H	Min
8	90
7	30
– 3	45
5	45

c. Vidhi reached the school at = 8 : 30 a.m.
Rohan has reached 45 minutes after her.
So, Rohan reached school = 8 : 30 + 45 min
= 9 : 15 a.m.
So, Rohan reached school at 9 : 15 a.m.

H	Min
8	30
– 0	45
8	75
9	15

d. Jatin reached home at = 6 : 30 p.m.
Nitin had reached 2 hours 45 minutes, Earlier than Jatin.
So, Nitin reached home at 6 : 30 p.m. – 2 : 45
= 3 : 45 p.m.
So, Jatin had reached home at 3 : 45 p.m.

H	Min
5	90
6	30
– 2	45
3	45

e. Menka goes to school at = 8 : 20 a.m.
and returns home at = 3 : 30 p.m.
duration of time = 3 : 30 p.m. – 8 : 20 a.m.
= (1530 – 0820) hours = 0710 hours
or 7 hours 10 minutes.

Exercise 12 (f)

1. Which of the following are leap years ?

Ans. a. **2006**

```
4)2006(501
 -20 |
   0 |
  -0 |
   6
  -4
   2
```

∵ 2006 is not exactly divisible by 4.
So, 2006 is not a leap year.

b. **2004**

```
4)2004(501
 -20 |
   0 |
  -0 |
   4
  -4
   0
```

∵ 2004 is exactly divisible by 4.
So, 2004 is a leap year.

c. **2029**

```
4)2029(507
 -20
   29
  -28
    1
```

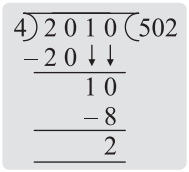
2029 is not exactly divisible by 4.
∵ So, 2029 is not a leap year.

d. **2032**

```
4)2032(508
 -20
   32
  -32
    0
```

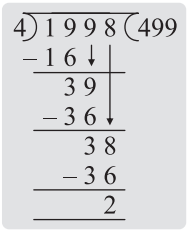
2032 is exactly divisible by 4.
∵ So, 2032 is a leap year.

e. **2012**



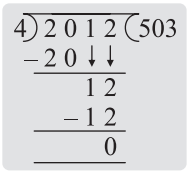
∵ 2012 is exactly divisible by 4.
So, 2012 is a leap year.

f. **1952**



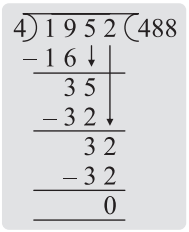
∵ 1952 is exactly divisible by 4.
So, 1952 is a leap year.

g. **2010**



∵ 2010 is not exactly divisible by 4.
So, 2010 is not a leap year.

h. **1998**



∵ 1998 is not exactly divisible by 4.
So, 1998 is not a leap year.

2. Solve.

Ans. a. Mrs Gautam took a leave from = 14th April
Duration of leave = 35 days
So, she will rejoin her duty = 14th April + 35 days
= 19th May

b. Avni's family reached Shimla
on the morning of = 19 October
They left shimla on = 5 November
Duration of staying in Shimla on = 19 Oct to 5 Nov
= 13 + 5 = 18 days

c. Vidushi was on leave from = 10 May to 11 July
So, no. of days between = 22 + 30 + 11
= 63 days

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. c 3. b 4. b 5. c

NEP

Ans. Do it yourself.

Life Skill and Values

Chapter 13 Money

Let's Recall

Do it yourself.

Exercise 13 (a)

1. Convert as directed.

Ans. a. ₹ 6 = **600** p b. ₹ 32.25 = **3225** p c. ₹ 7.05 = **705** p
d. 600 p = ₹ **6** e. 1545 p = ₹ **15.45** f. 575 p = ₹ **5.75**

2. Add the following :

Ans. a.
$$\begin{array}{r} ₹22.57 \\ +₹62.68 \\ \hline ₹85.25 \end{array}$$

b.
$$\begin{array}{r} ₹641.79 \\ +₹191.81 \\ \hline ₹833.60 \end{array}$$

c.
$$\begin{array}{r} ₹781.11 \\ +₹321.23 \\ ₹521.59 \\ \hline ₹1623.93 \end{array}$$

d.
$$\begin{array}{r} ₹207.91 \\ +₹130.21 \\ ₹\ 97.65 \\ \hline ₹435.77 \end{array}$$

3. Subtract the following :

Ans. a.
$$\begin{array}{r} ₹71.50 \\ -₹21.06 \\ \hline ₹50.44 \end{array}$$

b.
$$\begin{array}{r} ₹205.45 \\ -₹145.30 \\ ₹\ 60.15 \end{array}$$

c.
$$\begin{array}{r} ₹847.91 \\ -₹691.21 \\ \hline ₹156.70 \end{array}$$

d.
$$\begin{array}{r} ₹498.70 \\ -₹211.20 \\ \hline ₹287.50 \end{array}$$

4. Solve the following :

Ans. a.

The cost of a packet of crayons	=	₹	45.50
Cost of a book	=	₹	60.75
Cost of water bottle	=	+ ₹	135.95
Total cost of all things	=	₹	**242.20**

So, The total cost of these things is ₹242.20.

b. The cost of a spring roll = ₹ 110.00
The cost of a pizza = – ₹ 90.00
So, difference = ₹ **20.00**

So, There is ₹20.00 difference in their costs

c. Rajiv bought a shirt for = ₹ 400.50
He bought a table lamp = ₹ 212.75
He bought a pen stand = + ₹ 095.20
Total money he spent = ₹ **708.45**

He gave the shopkeeper = ₹ 1000
So, shopkeeper returned him = ₹ 1000 – 708.45
= ₹ 291.55

Exercise 13 (b)

1. Find the product :

Ans. a. **₹61.25 × 18**

₹61.25
×18
49000
6125×
₹1102.50

b. **₹92.64 × 15**

₹92.64
×15
46320
9264×
₹1389.60

c. **₹9.95 × 34**

₹9.95
×34
3980
2985×
₹338.30

d. **₹37.48 × 42**

₹37.48
×42
7496
14992×
₹1574.16

e. **₹70.48 × 23**

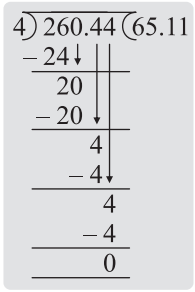
₹70.48
×23
21144
14096×
₹1621.04

f. **₹17.06 × 25**

₹17.06
×25
8530
3412×
₹426.50

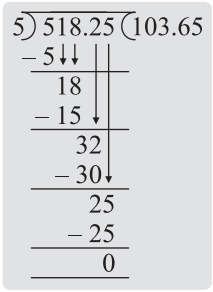
2. Divide :

Ans. a. **₹260.44 by 4**



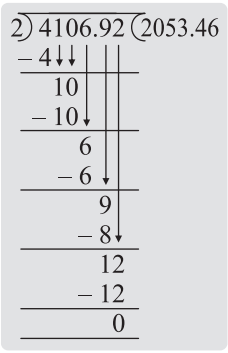
Thus, ₹260.44 ÷ 44 = ₹65.11

b. **₹518.25 by 5**



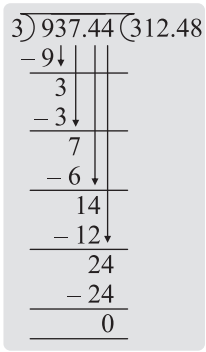
Thus, ₹518.25 ÷ 5 = ₹103.65

c. **₹4,106.92 by 2**



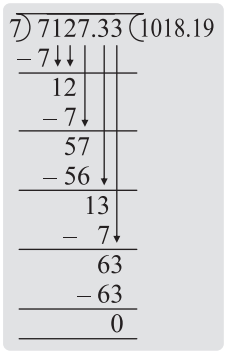
Thus, ₹4106.92 ÷ 2 = ₹2053.46

d. **₹937.44 by 3**



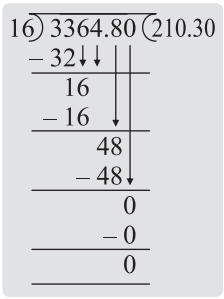
Thus, ₹937.44 ÷ 3 = ₹312.48

e. **₹7,127.33 by 7**



Thus, ₹7127.33 ÷ 7 = ₹1018.19

f. **₹3,364.80 by 16**



Thus, ₹3364.80 ÷ 16 = ₹210.30

g. **₹3,889.20 by 12**

```
12) 3889.20 (324.10
  - 36
    28
  - 24
    49
  - 48
     12
   - 12
      0
    - 0
      0
```

Thus, ₹3889.20 ÷ 12 = ₹324.10

h. **₹9,223.92 by 9**

```
9) 9223.92 (1024.88
 - 9
   22
 - 18
   43
 - 36
    79
  - 72
     72
   - 72
      0
```

Thus, ₹9223.92 ÷ 9 = ₹1024.88

i. **₹343.20 by 11**

```
11) 343.20 (31.2
  - 33
    13
  - 11
    22
  - 22
     0
   - 0
     0
```

Thus, ₹343.20 ÷ 11 = ₹31.20

3. Solve the following story problems.

Ans. a. Price of a chocolate = ₹ 16.15
Ria bought chocolates = ×3
Total amount = **₹ 48.45**
So, she had to pay ₹48.45 for 3 chocolates.

b. Cost of 25 packets of chips = ₹ 300
Cost of 1 packet of chips = ₹ 300 ÷ 25
So, cost of each packet of chips = ₹ 12

```
25) 300 (12
  - 25
    50
  - 50
     0
```

c. Cost of 1 kg of guava = ₹ 13.50
Cost of 35 kg of guava = ₹ 13.50 × 35
= ₹472.50.
So, the cost of 35 kg of guava is ₹ 472.50

```
  ₹13.50
   ×35
  6750
 4050×
₹472.50
```

d. Mrs Shastri had money = ₹ 1250.00
He gave money to few of friends = ₹ 250.00
So, No. of friends = 1250 ÷ 250
So, 5 friends will get the money.

```
250) 1250 (5
   - 1250
      0
```

Exercise 13 (c)

1. For each bill shown below a 1000-rupee note was given to the shopkeeper. Find the amount returned in each case.

Ans. a.

Bill	
Lunch box	₹ 196.75
Books	₹ 272.40
Towels	₹ 304.50
Total	₹ 773.65

Amount paid = ₹ 1000
Amount returned = ₹ (1000 – 773.65)
= ₹ 226.35

b.

Bill	
Pens	₹ 208.75
Notebooks	₹ 106.40
Calculators	₹ 282.95
School bag	₹ 195.70
Total	₹ 793.80

Amount paid = ₹ 1000
Amount returned = ₹ (1000 – – 793.80
= ₹ 206.20

2. Vandana went to a cosmetic product shop and buys 1 comb, 2 m ribbon, 6 clips and 2 hair pins. Complete the bill.

Ans.

S. No.	Item	Quantity	Rate	Cost (₹)
1.	Comb	1	12.75	**12.75**
2.	Ribbon	2 m	5.00	**10.00**
3.	Clips	6	10.50	**63.00**
4.	Hair pins	2	7.00	**14.00**
			Total =	**99.75**

3. Look at the price list given alongside and prepare the bill for the following.

Ans. a.

S. No.	Item	Quantity	Rate	Cost (₹)
1.	Ladies finger	$\frac{1}{2}$ kg	₹ 35.00/kg	**17.50**
2.	Potatoes	2 kg	₹ 20.00/kg	**40.00**
3.	Brinjals	1 kg	₹ 30.00/kg	**30.00**
			Total =	**87.50**

b.

S. No.	Item	Quantity	Rate	Cost (₹)
1.	bottle guard	$\frac{1}{2}$ kg	₹ 25.00/kg	**12.50**
2.	tomatoes	2 kg	₹ 14/kg	**28.00**
3.	potatoes	1 kg	₹ 20/kg	**20.00**
4.	Brinjal	$\frac{1}{2}$ kg	₹ 30/kg	**15.00**
			Total =	**₹ 75.50**

Ans. Do it yourself.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. c 3. a 4. c

Chapter 14

Perimeter and Area

Exercise 14 (a)

1. Find the perimeter of the following figures :

Ans. Perimeter = sum of the length of each sides of given figure.

a. 24 cm b. 19 cm c. 15 cm d. 20 cm e. 24 cm f. 28 cm

2. Find the perimeter of the rectangles whose length and breadth are given below :

Ans. a. **l = 22 cm, b = 18 cm**

$\therefore$ Perimeter of rectangle $= 2(l + b) = 2(22 + 18)$

$= 2 \times 40 \text{ cm} = 80 \text{ cm}$

b. **l = 32 m, b = 25 m**

$\therefore$ Perimeter of rectangle $= 2(l + b) = 2(32 + 25) \text{ m}$

$= 2 \times 57 \text{ m} = 114 \text{ m}$

c. **l = 35 m, b = 20 m**

$\therefore$ Perimeter of rectangle $= 2(l + b) = 2(35 + 20) \text{ m}$

$= 2 \times 55 \text{ m} = 110 \text{ m}$

d. **1 = 16 m, b = 9 m**

$\therefore$ Perimeter of rectangle $= 2(l + b) = 2(16 + 9)$

$= 2 \times 25 \text{ m} = 50 \text{ m}$

3. Find the perimeter of square whose side is given below :

Ans. a. **8 cm ;** Side $= 8 \text{ cm}$

$\therefore$ Perimeter of Square $= 4 \times \text{side}$

$= 4 \times 8 \text{ cm} = 32 \text{ cm}$

b. **16 cm ;** Side $= 16 \text{ cm}$

$\therefore$ Perimeter of Square $= 4 \times \text{side}$

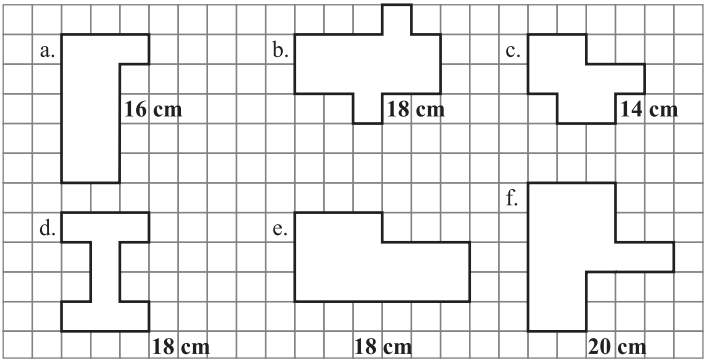
$= 4 \times 16 \text{ cm} = 64 \text{ cm}$

c. **25 m ;** Side = 25 cm
Perimeter of Square = 4 × side
= 4 × 25 m = 100 m

d. **92 cm ;** Side = 92 cm
Perimeter of Square = 4 × side
= 4 × 92 cm = 368 cm

4. Find the perimeter of each figure. The side of each small square is 1 cm :

Ans.



5. Solve the following.

Ans. a. length = 25 m breadth = 17 m
Fence needed = perimeter of field
= 2 (l + b) = 2 × (25 + 17) m
= 2 × 42 m = 84 m
So, the fence needed with the length of 84 m.

b. Side = 30 cm
Perimeter = 4 × side = 4 × 30 cm = 120 cm
or (100 + 20) cm
= 100 cm + 20 cm = 1 m 20 cm
Hence, the length of the from is 1 m 20 cm.

c. length = 120 m breadth = 150 m
Distance = perimeter of park
= 2 (l + b) = 2 × (120 + 150) m
= 2 × 270 m = 540 m

d. length = 24 m breadth = 20 m
Perimeter = 2 (l + b) = 2 × (24 + 20)
= 2 × 44 m = 88 m

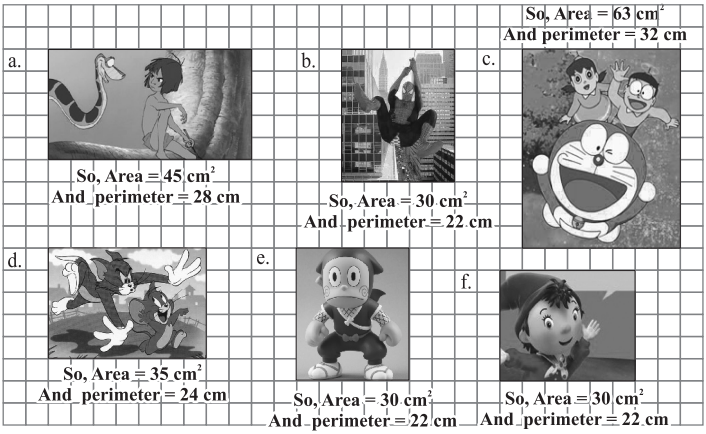
Higher order Thinking Skills (HOTS)

Ans. Breadth = $\frac{220}{2}$ m – 60 m = (110 – 60) m = 50 m

Exercise 14 (b)

1. Find the area and perimeter of these pictures of different cartoon characters. The side of each square is 1 cm :

Ans.



Exercise 14 (c)

1. Calculate the area of these shapes in square unit. The side of each square is 1 unit.

Ans. a. Area of shape = $15 + 3 \times \frac{1}{2}$ = $15 + 1\frac{1}{2}$

= $16\frac{1}{2}$ square unit = 16.5 square unit

b. Area of shape = $4 + 8 \times \frac{1}{2}$

= 4 + 4 = 8 square unit

c. Area of shape = $6 + 2 \times \frac{1}{2}$

= 6 + 1 = 7 square unit

d. Area of shape = $11 + 3 \times \frac{1}{2}$

= $12\ \frac{1}{2}$ square unit = 12.5 square unit

e. Area of shape = 7 square + 4 square more than

= 7 + 4 = 11 square unit $\frac{1}{2}$ square

f. Area of shape = 10 full square + 2 more than half square

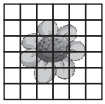
= 10 + 2 = 12 square unit

2. Find the area of the following.

Ans.

11 square unit

4 square unit



12 square unit

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. b 3. a

Chapter

15 Data Handling

Let's Recall

The table shows the number of children who have visited various monuments. Use the information and make a pictograph. Use ☺ = 1 child

Ans.

Monuments	Number of children
Red fort	☺☺☺☺☺☺☺☺
Tajmahal	☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺
India Gate	☺☺☺☺☺☺☺☺
Gateway of India	☺☺☺☺☺☺☺☺☺☺☺
Buland Darwaja	☺☺☺☺☺☺☺☺

Now look at the pictograph and answer the questions that follow :

Ans. a. Tajmahal b. India Gate

Exercise 15 (a)

1. Represent the given information with the help of a pictograph. The favourite sweet dish of children of class IV.

Ans.

Sweet Dish	Number of children
Cake	☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺
Ice cream	☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺
Rasgulla	☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺
Pudding	☺ ☺ ☺ ☺ ☺ ☺

2. The table given below shows the marks obtained by the 5 friends in a test.

Ans. Use 1 ⊕ = 5 marks

Name of students	Marks obtained
Aneek	⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕
Sarah	⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕
Vishakha	⊕ ⊕ ⊕ ⊕ ⊕
Manit	⊕ ⊕ ⊕ ⊕ ⊕ ⊕
Gurmeet	⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕

Now, answer the questions given below.

a. Aneek b. Vishakha

c. 5 marks d. 190 marks

3. The students of a school were surveyed regarding their hobby.

Ans Now, answer the following questions.

a. 50 students b. Playing cricket

c. 75 students d. 280 students

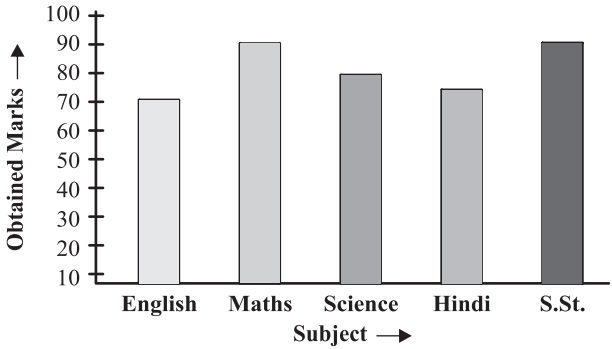
Exercise 15 (b)

1. The bar graph given below shows the number of children in a locality who like different flavours of ice-cream. Read the bar graph and answer the questions that follow.

Ans. a. strawberry b. Butter scotch
c. 10 children d. 76 children

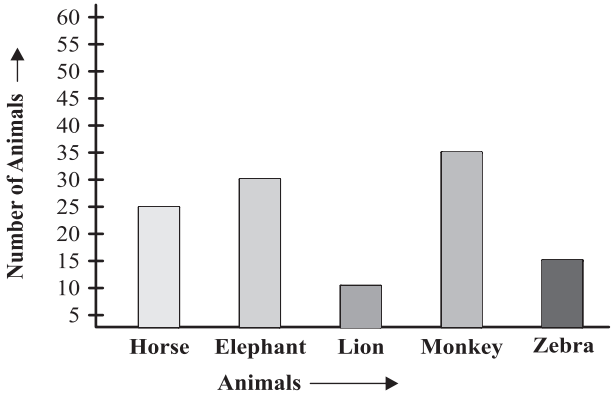
2. The list shows the marks obtained by Riya in different subjects. Prepare a bar graph to the given information.

Ans.



4. The list shows the number of animals in the zoo. Use the information to prepare a bar graph.

Ans.



Exercise 15 (c)

- **Zeenat made a pie chart of favourite animal of children visiting the zoo. Look at the pie chart and mark True (T) or False (F) :**

Ans. a. T b. T c. F d. F e. T

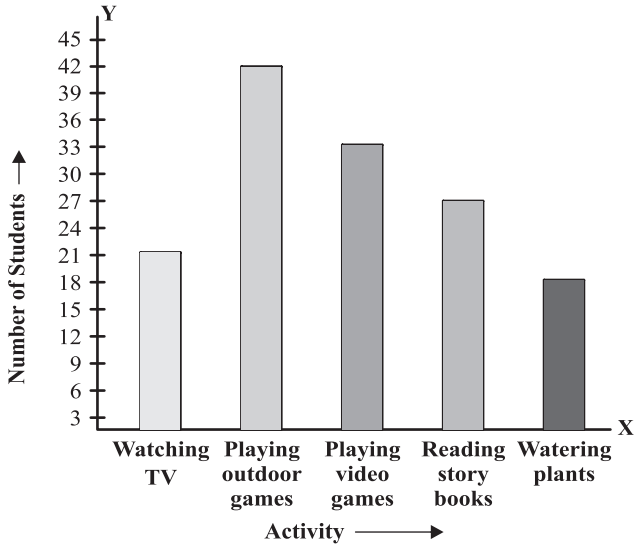
Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. b 3. a

Fun with Maths

Ans.



Chapter 1

Large Numbers

Let's Recall

Write the lengths in words and arrange them in ascending order.

Ans. 1. Ganga **Two thousand five hundred twenty-five kilometres.**
2. Yamuna **One thousand three hudnred seventy-six kilometres.**
3. Sutlej **One thousand four hundred fifty kilometres.**
4. Mahanadi **Nine hundred kilometres.**
5. Krishna **One thousand four houndred kilometres.**

Ascending order! 900 km, 1376 km, 1400 km, 1450 km, 2525 km

Exercise 1 (a)

1. Write the number name for each of the following numbers using the Indian place value system :

Ans.

S.No.	Number	Number Name
a.	86,23,085	Eighty-six lakh twenty-three thousand eighty-five
b.	7,01,30,103	Seven crore one lakh thirty thousand one hundred three
c.	99,87,65,432	Ninety-nine crore eighty-seven lakh sixty-five thousand four hundred thirty-two
d.	70,00,00,000	Seventy crore

2. Write the numerals for each of the following :

Ans.

	Number Name	Numeral
a.	Two crore seven lakh eight thousand sixty.	**2,07,08,060**
b.	Fifty-two crore fifty-two lakh fifty-two thousand five hundred twenty-five.	**52,52,52,525**
c.	Forty-two crore five lakh.	**42,05,00,000**
d.	Seventy crore seventy lakh seventy thousand seven hundred seven.	**70,70,70,707**

e. Fifty crore fifty. **50,00,00,050**
f. Seventy-six crore. **76,00,00,000**
g. Ninety-five lakh two hundred seven. **95,00,207**

3. Find the place value of coloured digits in the following :

Ans. a. The place value of 5 in 6,35,397 = 5 thousands
= 5 × 1000 = 5000

b. The place value of 6 in 96,48,37,341 = 6 crores
= 6 × 1,00,00,000
= 6,00,00,000

c. The place value of 8 in 5,82,32,251 = 8 ten lakhs
= 8 × 10,00,000
= 80,00,000

d. The place value of 0 in 2,05,35,319 = 0

e. The place value of 7 in 20,07,05,955 = 7 × Laks
= 7 × 1,00,000
= 7,00,000

f. The place value of 5 in 7,06,25,697 = 5 thousands
= 5 × 1000 = 5000

4. Write the expanded form of the following numbers :

Ans. a. 65,56,475 = 60,00,000 + 5,00,000 + 50,000 + 6,000 + 400 + 70 + 5

b. 3,35,17,987 = 3,00,00,000 + 30,00,000 + 5,00,000 + 10,000 + 7,000 + 900 + 80 + 7

c. 55,82,181 = 50,00,000 + 5,00,000 + 80,000 + 2,000 + 100 + 80 + 1

d. 71,12,630 = 70,00,000 + 1,00,000 + 10,000 + 2,000 + 600 + 30

e. 16,78,45,631 = 10,00,00,000 + 6,00,00,000 + 70,00,000 + 8,00,000 + 40,000 + 5,000 + 600 + 30 + 1

f. 28,35,17,893 = 20,00,00,000 + 8,00,00,000 + 30,00,000 + 5,00,000 + 10,000 + 7,000 + 800 + 90 + 3

5. Find :

Ans. a. **3969049**

Place value of first 9	=	9
Place value of second 9	=	9,000
Place value of third 9	=	+ 9,00,000
Sum	=	**9,09,009**

b. **78,63,62,275**

Place value of first 6	=	60,00,000
Place value of second 6	=	– 60,000
Difference	=	**59,40,000**

c. **49,79,306**

Place value of 7	=	70,000
Face value of 7	=	× 7
Product	=	**4,90,000**

6. Write the following numbers in short form :

Ans.

S.No.	Expanded Form	Short Form
a.	90,00,000 + 7,00,000 + 50,000 + 3,000 + 40 + 9	97,53,049
b.	30,00,000 + 9,00,000 + 10,000 + 5,000 + 400 + 60 + 4	39,15,464
c.	8,00,00,000 + 70,00,000 + 9,00,000 + 50,000 + 4,000 + 300 + 20 + 7	8,79,54,327
d.	70,00,00,000 + 40,00,000 + 20,000 + 700 + 5	70,40,20,705

Exercise 1 (b)

1. Rewrite the following numerals using commas to separate the periods according to the Indian place value system and International place value system :

Ans.

S.No.	Numeral	Indian System	International Sysetm
a.	226769804	22, 67, 69, 804	226, 769, 804
b.	699999996	69, 99, 99, 996	699, 999, 996
c.	398423007	39, 84, 23, 007	398, 423, 007
d.	553200509	55, 32, 00, 509	553, 200, 509
e.	400000002	40, 00, 00, 002	400, 000, 002
f.	80001237	8, 00, 01, 237	80, 001, 237

2. Write each of the following numbers in words using International Place Value System :

Ans. a. **5,300,649** = Five million three hundred thousand six hundred forty-nine.

b. **2,896,450** = Two million eight hundred ninety-six thousand four hundred fifty.

c. **3,856,989** = Three million eight hundred fifty-six thousand nine hundred eighty-nine.

d. **40,500,179** = Forty million, Five hundred thousand, One hundred seventy-nine.

e. **256,545,198** = Two hundred fifty-six million five hundred forty-five thousand one hundred ninety-eight.

f. **534,938,125** = Five hundred thirty-four million nine hundred thirty-eight thousand one hundred twenty-five.

g. **98,256,188** = Ninety-eight million two hundred fifty-six thousand one hundred eighty-eight.

h. **123,453,536** = One hundred twenty-three million four hundred fifty-three thousand five hundred thirty-six.

3. Write the following in figures :

Ans. a. 3,743,142 b. 9,547,505 c. 56,054,532

d. 22,240,783 e. 405,004,999

4. Fill in the blanks :

Ans. a. 1 million = **10** lakhs. b. 100 lakhs = **10** millions.

c. 10 millions = **1** crore. d. **10** crores = 100 millions.

Higher order Thinking Skills (HOTS)

Ans. 10 watches.

Exercise 1 (c)

1. Compare each pair of numbers. Put >, < or = in the ___ :

Ans. a. 675,412 > 6,57,412 b. 44,621,312 < 44,621,413

c. 5,756,215 < 5,756,319 d. 999,899 < 999,998

e. 98,765,432 > 9,876,543 f. 623,456,100 < 623,732,156

2. Arrange the following numbers in ascending order :

Ans. a. **Ascending order :**

288689 < 2586798 < 20507106 < 40008216

b. **Ascending order :**
5896348 < 5896349 < 6896348 < 6896349

c. **Ascending order :**
3854798 < 38547986 < 385479850 < 385479860

d. **Ascending order :**
634398 < 6664398 < 43986666 < 66664398

3. Arrange the following numbers in descending order :

Ans. a. **Descending order :**
9300093 > 9200009 > 9100009 > 940000

b. **Descending order :**
78943025 > 78940325 > 78904325 > 78094325

c. **Descending order :**
345678912 > 3545878901 > 234567891 > 123456789

d. **Descending order :**
578342100 > 478342100 > 57834210 > 4783421

4. Write the predecessor and successor of each of the following numerals :

Ans.

S.No.	Number	Predecessor	Successor
a.	82915592	82915591	82915593
b.	73456704	73456703	73456705
c.	60000000	59999999	60000001
d.	598979600	598979599	598979601

Exercise 1 (d)

1. Write the smallest and greatest number formed by given digits :

Ans.

S.No.	Digits	Smallest Number	Greatest Number
a.	5, 7, 0, 1, 9, 4	104579	975410
b.	6, 8, 7, 2, 9, 4	246789	987642
c.	5, 7, 8, 1, 0, 2	102578	875210
d.	9, 6, 5, 3, 8	35689	98653
e.	0, 1, 2, 3, 4, 5, 6, 7, 8	102345678	876543210

2. Round these numbers as directed :

Ans. a. **7346 to the nearest 10**
Digit at ones place is 6.
Since 6 > 5
So, no. is rounded to 10
= 7350

b. **3388 to the nearest 100**
Digit at tens place is 8.
Since 8 > 5
So, no. is rounded to 100
= 3400

c. **91003 to the nearest 1000**
Digit at hundreds place is 0.
Since 0 < 5
So, required no. is 91000

d. **649 to the nearest 10**
Digit at ones place is 9.
Since 9 > 5
So, required no. is 650

e. **75325 to the nearest 100**
Digit at tens place is 2.
Since, 2 < 5
So, required no. is 75300

f. **86950 to the nearest 1000**
Digit at hundreds place is 9.
Since, 9 > 5
So, required no. is 87000.

3. Round the numbers to the nearest ten thousand :

Ans. a. **60,349**
Digit at thousands place is 0.
Since 0 < 5
So, required no. = 60,000

b. **79,432**
Digit at thousands place is 9.
Since 9 > 5
So, required no. = 80,000

c. **85,000**
Digit at thousands place is 5.
Since 5 = 5
So, required no. = 90,000

d. **43,150**
Digit at thousands place is 3.
Since 3 < 5
So, required no. = 40,000

e. **53,109**
Digit at thousands place is 3.
Since 3 < 5
So, required no. = 50,000

4. Round the numbers to the nearest lakh :

Ans. a. **1,56,932**
Digit at ten thousands place is 5.
Since 5 = 5
So, Required No. = 20,00,00

b. **2,09,321**
Digit at ten thousands place is 0. Since 0 < 5
So, Required No. = 2,00,000

c. **4,18,399**
Digit at ten thousands place is 1.
Since 1 < 5
So, Required no. = 4,00,000

d. **5,93,299**
Digit at ten thousands place is 9. Since 9 > 5
So, Required no. = 6,00,000

e. **8,50,000**
Digit at ten thousands place is 5.
Since 5 = 5
So, Required no. = 9,00,000

NEP Integrated Approach

The table given below lists the approximate distances.

From	Distance (in km)	From	Distance (in km)
Sun to Mercury	5,79,24,000	Mars to Jupiter	54,97,95,300
Mercury to Venus	4,98,79,000	Jupiter to Saturn	64,85,87,900
Venus to Earth	4,18,34,000	Saturn to Uranus	1,44,74,56,400
Earth to Mars	7,81,97,400	Uranus to Neptune	1,62,18,72,000

Ans. a. Five crore seventy-nine lakh twenty-four thousand
Four crore ninety-eight lakh seventy-nine thousand
Four crore eighteen lakh thirty-four thousand
Seven crore eighty-one thousand ninety-seven thousand four hundred
Fifty-four crore ninety-seven lakh ninety-five thousand three hundred
Sixty-four crore eighty-five lakh eighty-seven thousand nine hundred

b. Fifty-seven million nine hundred twenty-four thousand
Forty-nine million eight hundred seventy-nine thousand
Forty-one million eight hundred thirty-four thousand
Seventy-eight million one hundred ninety-seven thousand four hundred
Five hundred forty-nine million seven hundred ninety-five thousand three hundred
Six hundred forty-eight million five hundred eighty-seven thousand nine hundred

c. Six hundred forty-eight million five hundred eighty-seven thousand nine hundred
One billion four hundred forty-seven million four hundred fifty six thousand four hundred

One billion six hundred twenty-one million eight hundred seventy-two thousands

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. a 3. d 4. c

Chapter 2

Roman Numerals

Looking Back

Complete the crossword with the Hindu-Arabic numerals.

Ans.

		[1] 1			
		[2] 5	0		
[3] 1	6			[4] 1	[5] 2
4		[6] 1	3		0
		7		[7] 1	9
				[8] 2	8

Across →

2. L
3. XVI
4. XII
6. XIII
7. XIX
8. XVIII

Down ↓

1. XV
3. XIV
5. XX
6. XVII
7. XI

Exercise 2 (a)

1. Write the following as Roman numerals :

Ans. a. XLIX b. CCXXXI c. CCCXII
d. CLXIII e. CCLXXXIX f. CCCXXXIV
g. CDLXVII h. DLXXIX i. MCMXXXVIII
j. MCCLVI

2. Write the following as Hindu-Arabic numerals :

Ans. a. 48 b. 110 c. 635 d. 162 e. 190
f. 222 g. 282 h. 508 i. 1125 j. 742

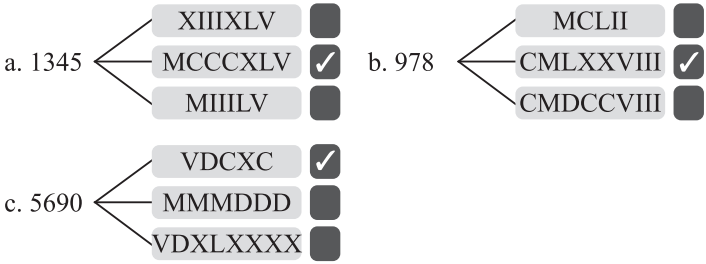
3. Compare the following Roman numerals and use >, < or = :

Ans. a. LIX < LXXI b. CD < DC
c. MCXCIII = MCXCIII d. DCVII > CDVII
e. CCLXXV > CXLV f. CMII < CMV

Worksheet

Tick the correct Roman numeral for the given Hindu Arabic numeral :

Ans.



Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. c 3. a

Chapter 3

Addition and Subtraction

Let's Recall

Read the statements about the book fair and solve :

Ans. 1. No. of males = 1790
No. of females = + 1325
Total people at the book fair = **3115**

2. Number of Hindi language books = 3745
Number of English language books = 4594
Since, 4594 > 3745
So, English books are more than Hindi books
So, 849 books of English is more than Hindi books.

```
  4594
- 3745
------
 **849**
```

Exercise 3 (a)

1. Verify by adding and name the property :

Ans. a. Commutative property b. Commutative property
c. Grouping associative property

2. Add the following :

Ans. a.

	TL	L	TTh	Th	H	T	O
	1	0	0	9	9	3	9
+	2	3	5	0	3	6	1
	3	3	6	0	3	0	0

b.

	TL	L	TTh	Th	H	T	O
	4	1	4	0	7	2	8
+	5	3	5	8	4	5	9
	9	4	9	9	1	8	7

c.

	TL	L	TTh	Th	H	T	O
	4	5	0	4	9	3	7
+	3	1	6	9	8	4	6
	7	6	7	4	7	8	3

3. Find the sum of the following numbers :

Ans. a.

TL	L	TTh	Th	H	T	O
6	0	7	8	0	0	5
+			5	7	3	7
6	0	8	3	7	4	2

b.

TL	L	TTh	Th	H	T	O
2	7	6	0	5	4	8
+ 1	0	8	1	5	3	1
3	8	4	2	0	7	9

c.

TL	L	TTh	Th	H	T	O
1	8	3	7	0	0	3
+	5	2	6	3	0	8
2	3	6	3	3	1	1

d.

TL	L	TTh	Th	H	T	O
1	6	7	1	4	6	1
+ 2	2	6	3	5	0	2
3	9	3	4	9	6	3

4. Add the following :

Ans. a.

	C	TL	L	TTh	Th	H	T	O
		4	3	0	4	2	9	6
			3	8	7	4	0	4
+	1	1	9	1	6	3	4	1
	1	6	6	0	8	0	4	1

b.

	TL	L	TTh	Th	H	T	O
			4	5	7	3	8
	2	9	1	6	3	1	9
+	3	8	4	0	5	0	6
	6	8	0	2	5	6	3

c.

	TL	L	TTh	Th	H	T	O
			1	0	8	9	5
	2	9	4	6	9	7	5
+				4	9	8	7
	2	9	6	2	8	5	7

d.

	C	TL	L	TTh	Th	H	T	O
	1	8	0	9	0	7	0	5
			7	0	9	7	6	5
+						8	3	5
	1	8	8	0	1	3	0	5

5. Find the missing digits in each of the following :

Ans. a.

	1	2	7	7	9	8	4
+	3	9	6	5	1	7	2
	5	2	4	3	1	5	6

b.

	8	5	7	6	7	3	2
+	1	6	9	3	5	9	5
1	0	2	7	0	3	2	7

Exercise 3 (b)

1. Subtract the following :

Ans. a.

	TL	L	TTh	Th	H	T	O
	8	3	2	5	4	1	7
–	5	8	3	4	1	5	7
	2	4	9	1	2	6	0

b.

	TL	L	TTh	Th	H	T	O
	9	6	4	4	1	9	2
–	6	4	1	7	8	3	9
	3	2	2	6	3	5	3

c.

	TL	L	TTh	Th	H	T	O
	8	2	6	2	0	4	6
–	4	5	0	7	8	6	2
	3	7	5	4	1	8	4

2. Find the difference :

Ans. a.

	TL	L	TTh	Th	H	T	O
	3	8	6	3	9	0	5
–	1	2	7	8	9	9	9
	2	5	8	4	9	0	6

b.

	TL	L	TTh	Th	H	T	O
	6	5	7	5	2	7	9
–	2	0	0	8	5	9	1
	4	5	6	6	6	8	8

c.

	TL	L	TTh	Th	H	T	O
	3	2	6	4	1	0	5
–	1	1	2	7	1	8	6
	2	1	3	6	9	1	9

d.

	TL	L	TTh	Th	H	T	O
	9	6	0	8	3	1	5
–	5	0	7	6	5	3	1
	4	5	3	1	7	8	4

3. Find the missing digits :

Ans. a.

	TL	L	TTh	Th	H	T	O
	7	8	4	3	6	2	4
–	3	2	1	0	2	1	3
	4	6	3	3	4	1	1

b.

	TC	C	TL	L	TTh	Th	H	T	O
	8	5	7	2	4	6	1	3	9
–	4	1	3	0	2	4	1	1	5
	4	4	4	2	2	2	0	2	4

Exercise 3 (c)

1. Subtract and check your answer by addition :

Ans. a.

	TL	L	TTh	Th	H	T	O
	7	8	2	8	1	9	0
–	5	6	1	7	2	9	3
	2	2	1	0	8	9	7

Checking

	TL	L	TTh	Th	H	T	O
	2	2	1	0	8	9	7
+	5	6	1	7	2	9	3
	7	8	2	8	1	9	0

b.

	TL	L	TTh	Th	H	T	O
	9	8	3	9	1	8	4
–	2	1	0	0	0	0	0
	7	7	3	9	1	8	4

Checking

	TL	L	TTh	Th	H	T	O
	7	7	3	9	1	8	4
+	2	1	0	0	0	0	0
	9	8	3	9	1	8	4

c.

	C	TL	L	TTh	Th	H	T	O
	8	6	7	0	4	8	1	5
–	5	2	3	8	2	5	0	0
	3	4	3	2	2	3	1	5

Checking

	C	TL	L	TTh	Th	H	T	O
	3	4	3	2	2	3	1	5
+	5	2	3	8	2	5	0	0
	8	6	7	0	4	8	1	5

d.

	C	TL	L	TTh	Th	H	T	O
	2	7	0	5	6	7	3	0
–		5	7	1	8	2	9	0
	2	1	3	3	8	4	4	0

Checking

	C	TL	L	TTh	Th	H	T	O
	2	1	3	3	8	4	4	0
+		5	7	1	8	2	9	0
	2	7	0	5	6	7	3	0

Exercise 3 (d)

Solve these story sums :

Ans. 1. Mr. Sen bought a house for = ₹ 35,25,600
He bought a computer for = + ₹ 58,450
Total money, he spend = **₹ 35,84,050**

So, he spend ₹35,84,050 in all.

2. Population of village B = 43,45,400
Population more than village B = + 2,36,465
So, population of village A = **45,81,865**

So, population of village A is 45,81,865.

3. Sum of two numbers = 86,73,872
One Number = – 34,05,632
So, other Number = **52,68,240**

So, the other no. is 52,68,240.

4. No. of postal stamps in the post office = 67,34,127
   Postal stamps were burnt = – 42,64,068
   remaining postal stamps = **24,70,059**

   So, There was 24,70,059 postal stamps left.

5. Difference between two numbers = 24,50,172
   Smaler Number = + 15,28,978
   So, the bigger no. = **39,79,150**

   So, the bigger no. will be 39,79,150.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. a 3. c 4. a

NEP Critical Thinking

Solve problems and match the following by colouring them alike.

Ans.

860000501 – 2987010093	1,27,34,565
7462996 + 5271569	2,25,45,187
8789484 + 3322115 + 3234455	4,27,840
26013642 – 3468455	56,12,99,408
563456 – 246910 + 111294	1,53,46,054

Chapter 4

Multiplication and Division

Let's Recall

Raghu the farmer working in his garden, read the statements and solve the question.

Ans. 1.

```
       129
50 ) 6450
    - 50↓
      145
    - 100↓
       450
     - 450
         x
```

Answer :

129 boxes were made.

Exercise 4 (a)

1. Fill in the blanks using the multiplication facts.

Ans. a. **8175** × 8570 = 8570 × 8175   b. 7125 × 1253 = 1253 × **7125**

c. 1 × 3795 = **3795**   d. 8612 × **0** = 0

e. 2494 × **1** = 2494   f. 82728 × 0 = **0**

2. Multiply the following.

Ans. a. 152 × 80 = **12,160**   b. 1375 × 50 = **68,750**

c. 262 × 90 = **23,580**   d. 12629 × 600 = **75,77,400**

Exercise 4 (b)

1. Multiply :

Ans. a.

```
   4967
    ×92
   9934
 44703×
 456964
```

Thus, 4967 × 92 = 4,56,964

b.

```
   7239
    ×37
  50673
 21717×
 267843
```

Thus, 7239 × 37 = 2,67,843

c.

```
   5135
    ×43
  15405
 20540×
 220805
```

Thus, 5135 × 43 = 2,20,805

d.

```
   2138
    ×68
  17104
 12828×
 145384
```

Thus, 2138 × 68 = 1,45,384

e.

```
   26854
     ×84
  107416
 214832×
 2255736
```

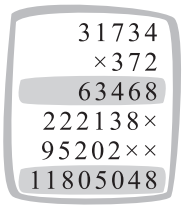
Thus, 26854 × 84 = 22,5,5736

f.

```
   19807
     ×72
   39614
 138649×
 1426104
```

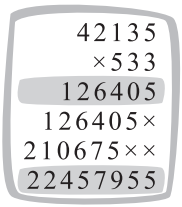
Thus, 19807 × 72 = 14,26,104

g.



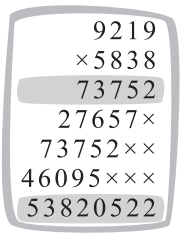
Thus, 31734 × 372
= 1,18,05,048

h.



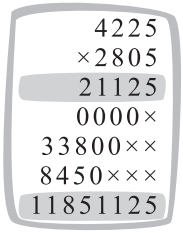
Thus, 42135 × 533
= 2,24,57,955

i.



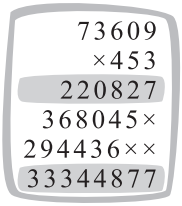
Thus, 9219 × 5838
= 5,38,20,522

j.



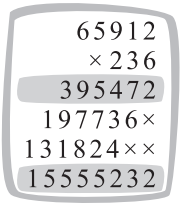
Thus, 4225 × 2805
= 1,18,51,125

k.



Thus, 73609 × 453
= 3,33,44,877

l.



Thus, 65912 × 236
= 1,55,55,232

2. Find the product of :

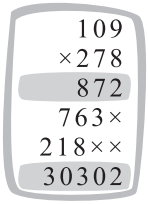
Ans. a. **109 × 278 × 47**

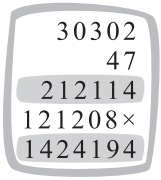
= 30,302 × 47

= 14,24,194

Thus, 109 × 278 × 47

= 14,24,194

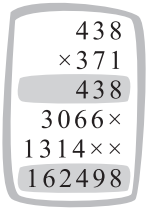


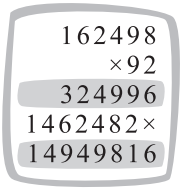


b. **438 × 371 × 92**

= 16,2,498 × 92

= 1,49,49,816

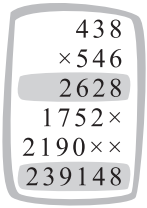


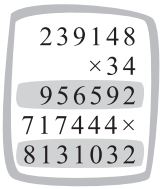


Thus, 438 × 371 × 92 = 1,49,49,816

c. **438 × 546 × 34**

= 239148 × 34
= 8131032

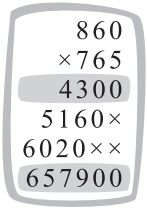


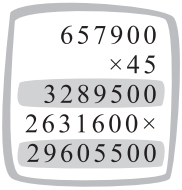


Thus, 438 × 546 × 34 = 81,31,032

d. **860 × 765 × 45**

= 6,57,900 × 45
= 2,96,05,500





Thus, 860 × 765 × 45 = 2,96,05,500

Exercise 4 (c)

1. Fill in the blanks :

Ans. a. 3450 ÷ 1 = **3450**
b. 29876 ÷ 29876 = **1**
c. **0** ÷ 495 = 0
d. 37945 ÷ 0 = **Not defined**

2. Complete the table.

Ans.

	Number	Quotient	Remainder
a.	8164 ÷ 10	816	4
b.	18275 ÷ 100	182	75
c.	888888 ÷ 10	88888	8
d.	723456 ÷ 10000	72	3456

3. Find :

Ans. a. Divisor = 35, quotient = 22, remainder = 14
Dividend = divisor × quotient + remainder
= 35 × 22 + 14 = 770 + 14 = 784

b. Dividend = 3699
Divisor = ?

Quotient = 231
Remainder = 3
Dividend = divisor × quotient + remainder
3699 = divisor × 231 + 3
3699 – 3 = divisor × 231

Divisor = $\frac{3696}{231} = 16$

Divisor = 16

Exercise 4 (d)

1. Divide the following :

Ans. a.

```
      876
92) 80645
   – 736
      704
    – 644
      605
    – 552
       53
```

b.

```
       1734
214) 371265
    – 214
      1572
    – 1498
       746
     – 642
      1045
     – 856
       189
```

c.

```
        9415
305) 2871697
    – 2745
      1266
    – 1220
       469
     – 305
      1647
    – 1525
       122
```

d.

```
         7283
1245) 9067852
     – 8715
       3528
     – 2490
      10385
     – 9960
       4252
     – 3735
        517
```

Hence,	Hence,	Hence,	Hence,
80645 ÷ 92	371265 ÷ 214	2871697 ÷ 305	9067852 ÷ 1245
Q = 876,	Q = 1734,	Q = 9415,	Q = 7283,
R = 53	R = 189	R = 122	R = 517

2. Divide and check your answer :

Ans. a. **11426 ÷ 87**

Q = 131, R = 29

Check :

Dividend = divisor × quotient + remainder
11426 = 87 × 131 + 29
11426 = 11397 + 29
11426 = 11426 ⇒ L.H.S = R.H.S

So, answer is correct.

```
      131
87) 11426
   – 87
     272
   – 261
     116
    – 87
      29
```

b. **42872 ÷ 36**

Q = 1190, R = 32

Check :

Dividend = divisor × quotient + remainder

42872 = 36 × 1190 + 32

42872 = 42840 + 32

42872 = 42872 ⇒ L.H.S = R.H.S

So, answer is correct.

```
       1190
36) 42872
   - 36
      68
    - 36
     327
   - 324
      32
    - 00
      32
```

c. **32188 ÷ 68**

Q = 473, R = 24

Check :

Dividend = divisor × quotient + remainder

32188 = 68 × 473 + 24

32188 = 32164 + 24

32188 = 32188 ⇒ L.H.S = R.H.S

So, answer is correct.

```
        473
68) 32188
   - 272
     498
   - 476
     228
   - 204
      24
```

d. **162097 ÷ 76**

Q = 2132, R = 65

Check :

Dividend = divisor × quotient + remainder

162097 = 76 × 2132 + 65

162097 = 162032 + 65

162097 = 162097

L.H.S = R.H.S

So, answer is correct.

```
        2132
76) 162097
   - 152
      100
     - 76
      249
    - 228
      217
    - 152
       65
```

e. **25766 ÷ 115**

Q = 224, R = 6

Check :

Dividend = divisor × quotient + remainder

25766 = 115 × 224 + 6

25766 = 25760 + 6

25766 = 25766

L.H.S = R.H.S

So, answer is correct.

```
          224
115) 25766
    - 230
      276
    - 230
      466
    - 460
        6
```

f. **42135 ÷ 533**

Q = 79, R = 28

Check :

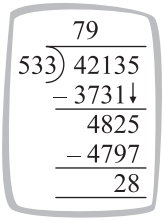
Dividend = divisor × quotient + remainder

42135 = 533 × 79 + 28

42135 = 42107 + 28

42135 = 42135 ⇒ L.H.S = R.H.S

So, answer is correct.



Exercise 4 (e)

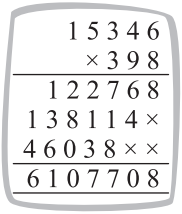
Ans. 1. Total no. of chairs = 15,346

Cost of each chair = ₹ 398

Total money spend on chairs = ₹ 15,346 × 398

= ₹ 61,07,708

So, Mr Jacob paid ₹6107708 to the shopkeeper for chairs.



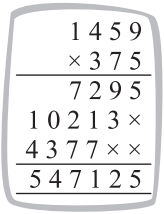
2. Cost of a set of dress = ₹ 1459

No. of sets = 375

Total cost of 375 sets of dress = ₹ 1459 × 375

= ₹ 5,47,125

So, the school paid ₹547125 for dresses.

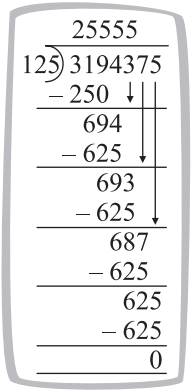


3. The cost of 125 toy cars = ₹ 31,94,375

∴ The cost of 1 toy car = ₹ 31,94,375 ÷ 125

= ₹ 25,555

So, the cost of 1 toy car is ₹25555.



4. No. of trees in each row=208
   No. of rows = 1958
   Total no. of trees = 208 × 1958
   = 4,07,264
   So, there are 4,07,264 trees in Justin's orchard.

$$\begin{array}{r} 1958 \\ \times 208 \\ \hline 15664 \\ 3916\times\times \\ \hline 407264 \\ \hline \end{array}$$

5. Total no. of apples = 6,48,550
   Apples can be packed in each box = 1526
   No. of boxes required = 648550 ÷ 1526
   = 425
   So, 425 boxes are required to pack 6,48,550 apples.

$$\begin{array}{r} 425 \\ 1526\overline{)\,648550} \\ -6104\downarrow \\ \hline 3815 \\ -3052\downarrow \\ \hline 7630 \\ -7630 \\ \hline 0 \\ \hline \end{array}$$

6. The product of two numbers = 2,69,928
   One no. = 552
   Other no. = 2,69,928 ÷ 552
   = 489
   So, the other number is 489.

$$\begin{array}{r} 489 \\ 552\overline{)\,269928} \\ -2208\downarrow \\ \hline 4912 \\ -4416\downarrow \\ \hline 4968 \\ -4968 \\ \hline 0 \\ \hline \end{array}$$

7. Books were printed = 1135
   Pages in each book = 236 pages
   Total pages in all the books = 1135 × 236
   So, there were 2,67,860 pages in all the books.

$$\begin{array}{r} 1135 \\ \times 236 \\ \hline 6810 \\ 3405\times \\ 2270\times\times \\ \hline 267860 \\ \hline \end{array}$$

8. Maximum capacity of people in a stadium = 52,650
   People can sit in each row = 975
   No. of rows = 52650 ÷ 975
   = 54
   So, there are 54 rows of seats in the stadium.

$$\begin{array}{r} 54 \\ 975\overline{)\,52650} \\ -4875\downarrow \\ \hline 3900 \\ -3900 \\ \hline 0 \\ \hline \end{array}$$

Multiple Choice Questions (MCQs)

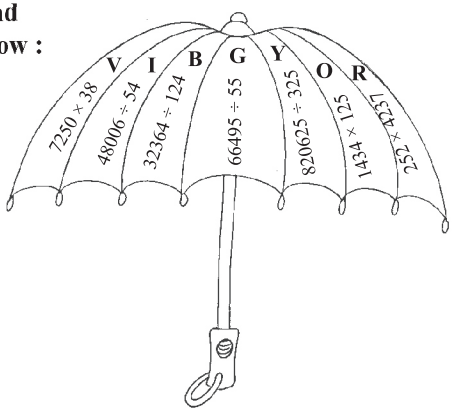
Choose the correct option.

Ans. 1. d 2. c 3. b

NEP Art Integration

Solve the given problems and colour the picture given below :

Ans.



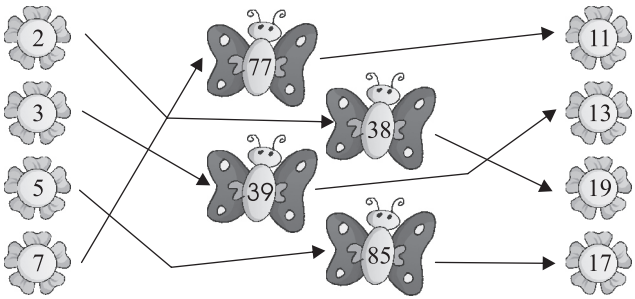
Chapter

5 Multiples and Factors

Let's Recall

The numbers in flower A and flowers B are the factors of the number in Butterfly. Match the flowers with correct butterfly :

Ans. **Flowers A** **Flowers B**



1. Write the factors of the following numbers :

Ans. a. **46**

1×46

2×23

$\therefore$ Factors of 46 = 1, 2, 23, 46

b. **85**

$1 \times 85 = 85$

$5 \times 17 = 85$

$\therefore$ Factors of 85 = 1, 5, 17, 85

c. **124**

$1 \times 124 = 124$

$2 \times 62 = 124$

$4 \times 31 = 124$

$\therefore$ Factors of 124 = 1, 2, 4, 31, 62, 124

d. **280**

$1 \times 280 = 280$ $\quad$ $2 \times 140 = 280$

$4 \times 70 = 280$ $\quad$ $5 \times 56 = 280$

$7 \times 40 = 280$ $\quad$ $8 \times 35 = 280$

$10 \times 28 = 280$ $\quad$ $14 \times 20 = 280$

$\therefore$ Factors of 280 = 1, 2, 4, 5, 7, 8, 10, 14, 20, 28, 35, 40, 56, 70, 140, 280

2. Which of the following are even numbers?

Ans. All no. which are divisible by 2 are called even no.

So, even no. are = 16, 38, 44, 48, 68, 84, 92

3. List all the prime numbers between :

Ans. a. **10 and 30**

Prime no. between 10 and 30 = 11, 13, 17, 19, 23, 29

b. **42 and 60**

Prime no. between 4 and 60 = 43, 47, 53, 59

c. **75 and 95**

Prime no. between 75 and 95 = 79, 83, 89

4. Which of the following pair of numbers are twin primes?

Ans. a. (5, 7) b. 27, 31 c. (71, 73) d. 41, 47

5. Which of the following pair are co-primes?

Ans. a. (16 and 21) b. (12 and 35) c. 24 and 39

1. Test which of the following numbers are divisible by 9 :

Ans. a. **8108**

$\because$ Sum of digits
$= 8 + 1 + 0 + 8 = 17$
Which is not divisible by 9,
So, 8108 is not divisible by 9.

b. **72432**

$\because$ Sum of digits
$= 7 + 2 + 4 + 3 + 2 = 18$
Which is divisible by 9,
So, 72432 is divisible by 9.

c. **64**

$\because$ Sum of digits
$= 6 + 4 = 10$
Which is not divisible by 9,
So, 64 is not divisible by 9.

d. **432981**

$\because$ Sum of digits
$= 4 + 3 + 2 + 9 + 8 + 1 = 27$
Which is divisible by 9,
So, 432981 is divisible by 9.

e. **174331**

$\because$ Sum of digits
$= 1 + 7 + 4 + 3 + 3 + 1 = 19$
Which is not divisible by 9,
So, 174331 is not divisible by 9.

f. **2872364**

$\because$ Sum of digits
$= 2 + 8 + 7 + 2 + 3 + 6 + 4 = 32$
Which is not divisible by 9,
So, 2872364 is not divisible by 9.

2. Test of the following numbers are divisible by 11 :

Ans. a. **3663**

Sum of the digits in the odd places = $3 + 6 = 9$
Sum of the digits in the even places = $6 + 3 = 9$
Difference between the two sums
$9 - 9 = 0$ Difference is equal to zero.
So, 3663 is divisible by 11.

b. **84927**

Sum of the digits in the odd places = $8 + 9 + 7 = 24$
Sum of the digits in the even places = $4 + 2 = 6$
Difference between the two sums.
$24 - 6 = 18$ $\because$ 18 is not divisible by 11.
So, 84927 is not divisible by 11.

c. **2345678**

Sum of the digits in the odd places = $2 + 4 + 6 + 8 = 20$
Sum of the digits in the even places = $3 + 5 + 7 = 15$
Difference between the two sums.
$20 - 15 = 5$ 5 is not divisible by 11.
So, 2345678 is not divisible by 11.

d. **247269**

Sum of the digits in the odd places = 2 + 7 + 6 = 15

Sum of the digits in the even places = 4 + 2 + 9 = 15

Difference between the two sums.

15 – 15 = 0 ∵ Difference is equal to zero.

So, 247269 is divisible by 11.

e. **86407**

Sum of the digits in the odd places = 8 + 4 + 7 = 19

Sum of the digits in the even places = 6 + 0 = 6

Difference between the two sums.

19 – 6 = 13 ∵ 13 is not divisible by 11.

So, 86407 is not divisible by 11.

f. **3330976**

Sum of the digits in the odd places = 3 + 3 + 9 + 6 = 21

Sum of the digits in the even places = 3 + 0 + 7 = 10

Difference between the two sums.

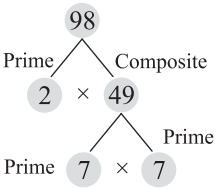
21 – 10 = 11 11 is divisible by 11.

So, 3330976 is divisible by 11.

Exercise 5 (c)

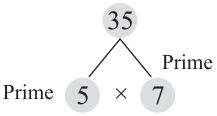
1. Make a factor tree for the following numbers :

Ans. a.



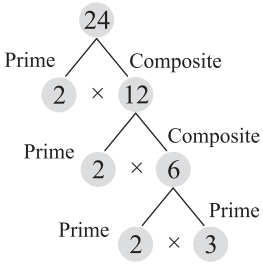
So, 98 = 2 × 7 × 7

b.

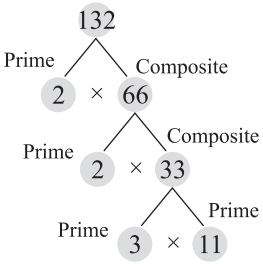


So, 35 = 5 × 7

c.

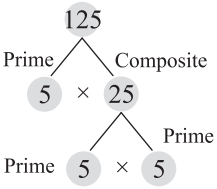


d.



So, $24 = 2 \times 2 \times 2 \times 3$ So, $132 = 2 \times 2 \times 3 \times 11$

e.



So, $125 = 5 \times 5 \times 5$

2. Write the following numbers as the product of their prime factors. Use division method.

Ans. a.

2	156
2	78
3	39
13	13
	1

So, $156 = 2 \times 2 \times 3 \times 13$

b.

2	500
2	250
5	125
5	25
5	5
	1

So, $500 = 2 \times 2 \times 5 \times 5 \times 5$

c.

2	750
3	375
5	125
5	25
5	5
	1

So, $750 = 2 \times 3 \times 5 \times 5 \times 5$

d.

2	864
2	432
2	216
2	108
2	54
3	27
3	9
3	3
	1

So, $864 = 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3$

e.

2	242
11	121
11	11
	1

So, $242 = 2 \times 11 \times 11$

Exercise 5 (d)

1. Find the HCF by prime factorization method :

Ans. a.

3	15
5	5
	1

2	30
3	15
5	5
	1

Factors of 15 = 3 × 5

Factors of 30 = 2 × 3 × 5

Common factors = 3 × 5

So, HCF = 3 × 5 = 15

b.

2	72
2	36
2	18
3	9
3	3
	1

2	84
2	42
3	21
7	7
	1

Factors of 72
= 2 × 2 × 2 × 3 × 3

Factors of 84
= 2 × 2 × 3 × 7

Common factors
= 2 × 2 × 3

So, HCF = 2 × 2 × 3 = 12

c.

2	28
2	14
7	7
	1

5	35
7	7
	1

Factors of 28 = 2 × 2 × 7

Factors of 35 = 5 × 7

Common factors = 7

So, HCF = 7

d.

3	99
3	33
11	11
	1

3	33
11	11
	1

Factors of 99 = 3 × 3 × 11

Factors of 33 = 3 × 11

Common factors = 3 × 11

So, HCF = 3 × 11 = 33

e.

2	24
2	12
2	6
3	3
	1

2	32
2	16
2	8
2	4
2	2
	1

2	56
2	28
2	14
7	7
	1

Factors of 24 = 2 × 2 × 2 × 3

Factors of 32 = 2 × 2 × 2 × 2 × 2

Factors of 56 = $2 \times 2 \times 2 \times 7$
Common factors = $2 \times 2 \times 2$
So, HCF = $2 \times 2 \times 2 = 8$

f.

2	20
2	10
5	5
	1

2	50
5	25
5	5
	1

2	90
3	45
3	15
5	5
	1

Factors of 20 = $2 \times 2 \times 5$
Factors of 50 = $2 \times 5 \times 5$
Factors of 90 = $2 \times 3 \times 3 \times 5$
Common factors = 2×5
So, HCF = $2 \times 5 = 10$

g.

2	80
2	40
2	20
2	10
5	5
	1

2	120
2	60
2	30
3	15
5	5
	1

2	200
2	100
2	50
5	25
5	5
	1

Factors of 80 = $2 \times 2 \times 2 \times 2 \times 5$
Factors of 120 = $2 \times 2 \times 2 \times 3 \times 5$
Factors of 200 = $2 \times 2 \times 2 \times 5 \times 5$
Common factors = $2 \times 2 \times 2 \times 5$
So, HCF = $2 \times 2 \times 2 \times 5 = 40$

h.

3	45
3	15
5	5
	1

5	65
13	13
	1

3	75
5	25
5	5
	1

Factors of 45 = $3 \times 3 \times 5$
Factors of 65 = 5×13
Factors of 75 = $3 \times 5 \times 5$
Common factors = 5
So, HCF = 5

2. Find the HCF using the long division method :

Ans. a.
$$\begin{array}{r} 10\overline{)\,16\,(1} \\ -10 \\ \hline 6\overline{)\,10\,(1} \\ -6 \\ \hline 4\overline{)\,6\,(1} \\ -4 \\ \hline 2\overline{)\,4\,(2} \\ -4 \\ \hline x \end{array}$$

So, HCF = 2

b.
$$\begin{array}{r} 27\overline{)\,30\,(1} \\ -27 \\ \hline 3\overline{)\,27\,(9} \\ -27 \\ \hline x \end{array}$$

So, HCF = 3

c.
$$\begin{array}{r} 28\overline{)\,56\,(2} \\ -56 \\ \hline x \end{array}$$

So, HCF = 28

d.
$$\begin{array}{r} 15\overline{)\,45\,(3} \\ -45 \\ \hline x \end{array}$$

So, HCF = 15

e.
$$\begin{array}{r} 18\overline{)\,20\,(1} \\ -18 \\ \hline 2\overline{)\,18\,(9} \\ -18 \\ \hline x \end{array}$$

So, HCF = 2

f. We first find the HCF of 25 and 36.

$$\begin{array}{r} 25\overline{)\,36\,(1} \\ -25 \\ \hline 11\overline{)\,25\,(2} \\ -22 \\ \hline 3\overline{)\,11\,(3} \\ -9 \\ \hline 2\overline{)\,3\,(1} \\ -2 \\ \hline 1\overline{)\,2\,(2} \\ -2 \\ \hline x \end{array}$$

So, HCF of 25 and 36 is 1.

Now, we find the HCF of 1 and 80.

$$\begin{array}{r} 1\overline{)\,80\,(80} \\ -8 \\ \hline 0 \\ 0 \\ \hline x \end{array}$$

$\therefore$ HCF of 1 and 80 is 1.
Hence, the required HCF of 25, 36 and 80 is 1.

g. We first find the HCF of 30 and 75.

$$\begin{array}{r|l} 30 & 75 \\ -60 & 2 \\ \hline 15 & 30 \\ -30 & 2 \\ \hline x & \end{array}$$

So, HCF of 30 and 75 is 15.

Now, we find the HCF of 15 and 15.

$$\begin{array}{r|l} 15 & 15 \\ -15 & 1 \\ \hline x & \end{array}$$

$\therefore$ HCF of 15 and 15 is 15.
Hence, the required HCF of 30, 75 and 15 is 15.

h. We first find the HCF of 60 and 100.

$$\begin{array}{r|l} 60 & 100 \\ -60 & 1 \\ \hline 40 & 60 \\ -40 & 1 \\ \hline 20 & 40 \\ -40 & 2 \\ \hline x & \end{array}$$

So, HCF of 60 and 100 is 20.

Now, we find the HCF of 20 and 125.

$$\begin{array}{r|l} 20 & 125 \\ -120 & 6 \\ \hline 5 & 20 \\ -20 & 4 \\ \hline x & \end{array}$$

$\therefore$ HCF of 20 and 125 is 5.
Hence, the required HCF of 60, 100 and 125 is 5.

Exercise 5 (e)

1. Find the LCM using the prime factorization method ;

Ans. a.

2	42
3	21
7	7
	1

2	70
5	35
7	7
	1

Factors of 42 = 2 × 3 × 7
Factors of 70 = 2 × 5 × 7
So, LCM = 2 × 7 × 3 × 5
= 210

b.

2	18
3	9
3	3
	1

3	27
3	9
3	3
	1

Factors of 18 = 2 × 3 × 3
Factors of 27 = 3 × 3 × 3
So, LCM = 3 × 3 × 2 × 3
= 54

c.

2	12
2	6
3	3
	1

3	15
5	5
	1

Factors of 12 = $2 \times 2 \times 3$
Factors of 15 = 3×5
So, LCM = $3 \times 2 \times 2 \times 5$
= 60

d.

2	40
2	20
2	10
5	5
	1

2	32
2	16
2	8
2	4
2	2
	1

Factors of 40 = $2 \times 2 \times 2 \times 5$
Factors of 32 = $2 \times 2 \times 2 \times 2 \times 2$
So, LCM = $2 \times 2 \times 2 \times 5 \times 2 \times 2$
= 160

e.

2	24
2	12
2	6
3	3
	1

2	36
2	18
3	9
3	3
	1

3	45
3	15
5	5
	1

Factors of 24 = $2 \times 2 \times 2 \times 3$
Factors of 36 = $2 \times 2 \times 3 \times 3$
Factors of 45 = $3 \times 3 \times 5$
So, LCM = $2 \times 2 \times 3 \times 3 \times 2 \times 5$ = 360

f.

2	12
2	6
3	3
	1

3	15
5	5
	1

2	40
2	20
2	10
5	5
	1

Factors of 12 = $2 \times 2 \times 3$ Factors of 15 = 3×5
Factors of 40 = $2 \times 2 \times 2 \times 5$
So, LCM = $2 \times 2 \times 3 \times 5 \times 2$ = 120

g.

3	15
5	5
	1

5	25
5	5
	1

2	30
3	15
5	5
	1

Factors of 15 = 3 × 5 Factors of 25 = 5 × 5
Factors of 30 = 2 × 3 × 5
So, LCM = 3 × 5 × 5 × 2
= 150

h.

2	20
2	10
5	5
	1

2	30
3	15
5	5
	1

2	50
5	25
5	5
	1

Factors of 20 = 2 × 2 × 5 Factors of 30 = 2 × 3 × 5
Factors of 50 = 2 × 5 × 5
So, LCM = 2 × 5 × 2 × 3 × 5 = 300

2. Find the LCM by the short division method :

Ans. a. **15, 45** b. **72, 32** c. **12, 20**

3	15, 45
3	5, 15
5	5, 5
	1, 1

So, LCM of
15 and 45
= 3 × 3 × 5
= 45

2	72, 32
2	36, 16
2	18, 8
2	9, 4
2	9, 2
3	9, 1
3	3, 1
	1, 1

So, LCM of
72 and 32
= 2 × 2 × 2 × 2
× 2 × 3 × 3 = 288

2	12, 20
2	6, 10
3	3, 5
5	1, 5
	1, 1

So, LCM of
12 and 20
= 2 × 2 × 3 × 5
= 60

d. **30, 55**

2	30, 55
3	15, 55
5	5, 55
11	1, 11
	1, 1

So, LCM of 30 and 55
$= 2 \times 3 \times 5 \times 11$
$= 330$

e. **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, LCM of 14, 16 and 8
$= 2 \times 2 \times 2 \times 2 \times 7$
$= 112$

f. **10, 15, 25**

2	10, 15, 25
3	5, 15, 25
5	5, 5, 25
5	1, 1, 5
	1, 1, 1

So, LCM of 10, 15 and 25
$= 2 \times 3 \times 5 \times 5$
$= 150$

g. **21, 14, 35**

2	21, 14, 35
3	21, 7, 35
5	7, 7, 35
7	7, 7, 7
	1, 1, 1

So, LCM of 21, 14 and 35
$= 2 \times 3 \times 5 \times 7$
$= 210$

h. **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, LCM of 16, 32 and 40
$= 2 \times 2 \times 2 \times 2 \times 2 \times 5$
$= 160$

3. Solve :

Ans. a. One no. = 25
Other no. = 65
HCF = ? LCM = 325
We know that
HCF × LCM = One no. × Other no.
HCF × 325 = 25 × 65

$$\text{HCF} = \frac{25 \times 65}{325} = \frac{25}{5} = 5$$

So, **HCF = 5**

b. LCM = 156

Because no. are co-prime so, their

HCF = 1 One no. = 13

Other no. = ?

We know that

LCM × HCF = One no. × Other no.

156 × 1 = 13 × Other no.

Other no. = $\frac{156}{13}$ = 12

So, Other no. = **12**

c. Product of two no. = 3072

LCM = 192, HCF = ?

We know that

LCM × HCF = product of two no.

192 × HCF = 3072

HCF = $\frac{3072}{192} = \frac{192}{12}$

HCF = **16**

Exercise 5 (f)

Solve the following :

Ans. 1. **180, 162**

To find the capacity of largest container that can to used to completely fill the containers we need to find HCF of 180 L and 162 L

∵ HCF of 180 and 162 = 18

So, capacity of largest container is 18 L.

```
162)180(1
  -162
   18)162(9
     -162
      x
```

2. **249, 309**

∵ Remainder = 9

∴ 249 – 9 = 240, 309 – 9 = 300

Now, we have to get HCF of 240 and 300

So, HCF = 60

So, 60 is the largest no. that divides 249 and 309 leaving remainder 9.

```
240)300(1
  -240
   60)240(4
     -240
      x
```

3. **12, 18, 20**

We need to get LCM of 12, 18 and 20 to find the time duration.

So, LCM = $2 \times 2 \times 3 \times 3 \times 5 = 180$

So, they well toll together after 180 min. or 3 hours.

2	12, 18, 20
2	6, 9, 10
3	3, 9, 5
3	1, 3, 5
5	1, 1, 5
	1, 1, 1

4. **350, 450**

We need to find HCF of 350 and 450.

So, Maximum no. of children in each group = 50

$350\overline{)450}(1$ -350 $100\overline{)350}(3$ -300 $50\overline{)100}(2$ -100 x

5. **210, 252, 294**

We need to find the HCF of 210, 252 and 294.

So, The biggest possible no. of students = 42

$210\overline{)252}(1$ -210 $42\overline{)210}(5$ -210 x

$42\overline{)294}(7$ -294 x

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. b 3. c

NEP

Experiential Learning

Ask each student to follow a path of numbers divisible by 2, 3 and 5 respectively, by colouring the numbers, to take the boy to the bus. The path may go up, down or across.

Ans.

44	16	49	8	10	70	11	47
24	60	21	55	68	41	71	94
44	72	49	51	37	120	8	91
28	27	45	91	150	99	126	77
63	47	36	75	180	23	200	61
88	10	8	78	17	31	6	36
45	25	12	21	40	64	54	135
59	61	19	37	99	79	39	22

Chapter

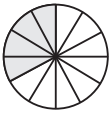
6 Fractional Numbers

Let's Recall

1. Fill in the ◯ and colour :

Ans. a. $\frac{1}{3}$ of 12 is ④

$\frac{1}{3}$ part green



b. $\frac{1}{4}$ of ⑧ is ②.

$\frac{1}{4}$ part red

2. Fill in the blanks :

a. Anil ate of 8 bananas. He ate **2** bananas.

b. Savita bought $\frac{1}{2}$ of the 12 eggs. She bought **6** eggs.

Exercise 6 (a)

1. Classify the following fractions as proper, improper, mixed or unit :

Ans. a. Proper fraction b. Unit fraction c. Proper fraction

d. Mixed fraction e. improper fraction f. improper fraction

2. Convert the following improper fractions into mixed fractions :

Ans. a. $\frac{18}{7}$

$7\overline{)18}\,(2$, -14, 4 $= 2\frac{4}{7}$

b. $\frac{46}{13}$

$13\overline{)46}\,(3$, -39, 7 $= 3\frac{7}{13}$

c. $\frac{121}{8}$

$8\overline{)121}\,(15$, -120, 1 $= 15\frac{1}{8}$

d. $\frac{78}{9}$

$9\overline{)78}\,(8$, -72, 6 $= 8\frac{6}{9}$

e. $\frac{106}{11}$

$11\overline{)106}\,(9$, -99, 7 $= 9\frac{7}{11}$

3. Convert the following mixed fractions into improper fractions :

Ans. a. $6\frac{1}{9} = \frac{6 \times 9 + 1}{9} = \frac{54 + 1}{9} = \frac{55}{9}$

b. $3\frac{2}{11} = \frac{3 \times 11 + 2}{11} = \frac{33 + 2}{11} = \frac{35}{11}$

c. $4\frac{1}{7} = \frac{7 \times 4 + 1}{7} = \frac{28 + 1}{7} = \frac{29}{7}$

d. $7\frac{3}{4} = \frac{7 \times 4 + 3}{4} = \frac{28 + 3}{4} = \frac{31}{4}$

e. $8\frac{1}{5} = \frac{8 \times 5 + 1}{5} = \frac{40 + 1}{5} = \frac{41}{5}$

4. Find three equivalent fractions of the following by multiplication :

Ans. a. Next three fractions equivalent to $\frac{1}{8}$ are :

$\frac{1 \times 2}{8 \times 2} = \frac{2}{16}$; $\frac{1 \times 3}{8 \times 3} = \frac{3}{24}$; $\frac{1 \times 4}{8 \times 4} = \frac{4}{32}$

Hence, the required fractions are $\frac{2}{16}$, $\frac{3}{24}$ and $\frac{4}{32}$.

b. Next three fractions equivalent to $\frac{2}{5}$ are :

$\frac{2 \times 2}{5 \times 2} = \frac{4}{10}$; $\frac{2 \times 3}{5 \times 3} = \frac{6}{15}$; $\frac{2 \times 4}{5 \times 4} = \frac{8}{20}$

Hence, the required fractions are $\frac{4}{10}$, $\frac{6}{15}$ and $\frac{8}{20}$.

c. Next three fractions equivalent to $\frac{5}{9}$ are :

$\frac{5 \times 2}{9 \times 2} = \frac{10}{18}$; $\frac{5 \times 3}{9 \times 3} = \frac{15}{27}$; $\frac{5 \times 4}{9 \times 4} = \frac{20}{36}$

Hence, the required fractions are $\frac{10}{18}$, $\frac{15}{27}$ and $\frac{20}{36}$.

d. Next three fractions equivalent to $\frac{6}{7}$ are :

$\frac{6 \times 2}{7 \times 2} = \frac{12}{14}$; $\frac{6 \times 3}{7 \times 3} = \frac{18}{21}$; $\frac{6 \times 4}{7 \times 4} = \frac{24}{28}$

Hence, the required fractions are $\frac{12}{14}$, $\frac{18}{21}$ and $\frac{24}{28}$.

e. Next three fractions equivalent to $\frac{5}{7}$ are :

$\frac{5 \times 2}{7 \times 2} = \frac{10}{14}$; $\frac{5 \times 3}{7 \times 3} = \frac{15}{21}$; $\frac{5 \times 4}{7 \times 4} = \frac{20}{28}$

Hence, the required fractions are $\frac{10}{14}$, $\frac{15}{21}$ and $\frac{20}{28}$.

5. Find the equivalent fraction of $\frac{8}{26}$, having :

Ans. a. We have $\frac{8}{26}$ and we have to find a fraction having denominator 52.

Since $26 \times 2 = 52$, so we multiply the numerator and denominator of the fraction $\frac{8}{26}$ by 2, we get $\frac{8 \times 2}{26 \times 2} = \frac{16}{52}$

Hence, the required fraction is $\frac{16}{52}$.

b. We have $\frac{8}{26}$ and we have to find a fraction having numerator 40.

Since $8 \times 5 = 40$, so we multiply the numerator and denominator of the fraction $\frac{8}{26}$ by 5, we get $\frac{8 \times 5}{26 \times 5} = \frac{40}{130}$

Hence, the required fraction is $\frac{40}{130}$.

c. We have $\frac{8}{26}$ and we have to find a fraction with denomi- nator 13.

Since $26 \div 2 = 13$, so we divide the numerator and denominator of the fraction $\frac{8}{26}$ by 2, we get $\frac{8 \div 2}{26 \div 2} = \frac{4}{13}$

Hence, the required fraction is $\frac{4}{13}$.

6. Check whether the pair of fractions given below are equivalent :

Ans. a. $\frac{4}{9}$, $\frac{12}{20}$

$\frac{4}{9} \times \frac{12}{20}$

b. $\frac{2}{5}$, $\frac{6}{15}$

$\frac{2}{5} \times \frac{6}{15}$

c. $\frac{7}{8}$, $\frac{12}{16}$

$\frac{7}{8} \times \frac{12}{16}$

d. $4 \times 20 \quad 9 \times 12$

$80 \neq 108$

So, This pair is not equivalent.

e. $2 \times 15 \quad 6 \times 5$

$30 = 30$

So, This pair is equivalent.

f. $7 \times 16 \quad 8 \times 12$

$112 \neq 96$

So, This pair is not equivalent.

$\frac{5}{6}$, $\frac{15}{18}$

$\frac{5}{6} \times \frac{15}{18}$

$5 \times 18 \quad 6 \times 15$

$90 = 90$

So, This pair is equivalent.

$\frac{2}{3}$, $\frac{8}{12}$

$\frac{2}{3} \times \frac{8}{12}$

$2 \times 12 \quad 3 \times 8$

$24 = 24$

So, This pair is equivalent.

$\frac{3}{4}$, $\frac{9}{15}$

$\frac{3}{4} \times \frac{9}{15}$

$3 \times 15 \quad 4 \times 9$

$45 \neq 36$

So, This pair is not equivalent.

7. Reduce the following fractions to the lowest term by dividing with their HCF :

Ans. a. $\frac{16}{28}$

$16 = 2 \times 2 \times 2 \times 2$

$28 = 2 \times 2 \times 7$

So, HCF $= 2 \times 2 = 4$

So, $\frac{16 \div 4}{28 \div 4} = \frac{4}{7}$

Hence, $\frac{16}{28}$ is reduced to the lowest term as $\frac{4}{7}$.

b. $\frac{45}{25}$

$45 = 3 \times 3 \times 5$

$25 = 5 \times 5$

So, HCF $= 5$

So, $\frac{45 \div 5}{25 \div 5} = \frac{9}{5}$

Hence, $\frac{45}{25}$ is reduced to the lowest term as $\frac{9}{5}$.

c. $\frac{32}{50}$

$32 = 2 \times 2 \times 2 \times 2 \times 2$

$50 = 2 \times 5 \times 5$

d. $\frac{112}{92}$

$112 = 2 \times 2 \times 2 \times 2 \times 7$

$92 = 2 \times 2 \times 23$

So, HCF = 2

So, $\frac{32 \div 2}{50 \div 2} = \frac{16}{25}$

Hence, $\frac{32}{50}$ is reduced to the lowest term as $\frac{16}{25}$.

So, HCF = $2 \times 2 = 4$

So, $\frac{112 \div 4}{92 \div 4} = \frac{28}{23}$

Hence, $\frac{112}{92}$ is reduced to the lowest term as $\frac{28}{23}$.

e. $\frac{54}{72}$

$54 = 2 \times 3 \times 3 \times 3$

$72 = 2 \times 2 \times 2 \times 3 \times 3$

So, HCF = $2 \times 3 \times 3 = 18$

So, $\frac{54 \div 18}{72 \div 18} = \frac{3}{4}$

Hence, $\frac{54}{72}$ is reduced to the lowest term as $\frac{3}{4}$.

f. $\frac{55}{100}$

$55 = 5 \times 11$

$100 = 2 \times 2 \times 5 \times 5$

So, HCF = 5

So, $\frac{55 \div 5}{100 \div 5} = \frac{11}{20}$

Hence, $\frac{55}{100}$ is reduced to the lowest term as $\frac{11}{20}$.

g. $\frac{18}{15}$

$18 = 2 \times 3 \times 3$

$15 = 3 \times 5$

So, HCF = 3

So, $\frac{18}{15} = \frac{18 \div 3}{15 \div 3} = \frac{6}{5}$

Hence, $\frac{18}{15}$ is reduced to the lowest term as $\frac{6}{5}$.

h. $\frac{75}{35}$

$75 = 3 \times 5 \times 5$

$35 = 5 \times 7$

So, HCF = 5

So, $\frac{75 \div 5}{35 \div 5} = \frac{15}{7}$

Hence, $\frac{75}{35}$ is reduced to the lowest term as $\frac{15}{7}$.

Exercise 6 (b)

1. Fill in the blanks using <, > or =.

Ans. a. $\frac{3}{4} > \frac{2}{3}$ b. $\frac{4}{5} > \frac{3}{4}$ c. $\frac{1}{12} < \frac{5}{7}$ d. $\frac{2}{8} < \frac{3}{5}$

e. $\frac{7}{8} > \frac{2}{3}$ f. $\frac{9}{10} > \frac{7}{8}$ g. $\frac{3}{4} > \frac{1}{5}$ h. $\frac{7}{10} < \frac{3}{4}$

2. Compare the following fractions by cross-multiplication method.

Ans. a. $\frac{7}{8}$ **or** $\frac{3}{4}$

$\frac{7}{8} \times \frac{3}{4}$

Since $28 > 24$

So, $\frac{7}{8} > \frac{3}{4}$

b. $\frac{3}{4}$ **or** $\frac{9}{10}$

$\frac{3}{4} \times \frac{9}{10}$

Since $30 < 36$

So, $\frac{3}{4} < \frac{9}{10}$

c. $\frac{9}{12}$ **or** $\frac{8}{18}$

$\frac{9}{12} \times \frac{8}{18}$

Since $162 > 96$

So, $\frac{9}{12} > \frac{8}{18}$

d. $\frac{4}{5}$ **or** $\frac{2}{7}$

$\frac{4}{5} \times \frac{2}{7}$

Since $28 > 10$

So, $\frac{4}{5} > \frac{2}{7}$

e. $\frac{8}{11}$ **or** $\frac{3}{55}$

$\frac{8}{11} \times \frac{3}{55}$

Since $440 > 33$

So, $\frac{8}{11} > \frac{3}{55}$

f. $\frac{3}{8}$ **or** $\frac{9}{15}$

$\frac{3}{8} \times \frac{9}{15}$

Since $45 < 72$

So, $\frac{3}{8} < \frac{9}{15}$

3. Arrange in ascending order.

Ans. a. $\frac{3}{8}$, $\frac{2}{3}$, $\frac{7}{12}$, $\frac{1}{4}$

2	8, 3, 12, 4
2	4, 3, 6, 2
2	2, 3, 3, 1
3	1, 3, 3, 1
	1, 1, 1, 1

LCM of 8, 3, 12, 4
$= 2 \times 2 \times 2 \times 3 = 24$
Now, by doing each fraction with same denominator, we have

$\frac{3}{8} = \frac{3 \times 3}{8 \times 3} = \frac{9}{24}$ $\quad \frac{2}{3} = \frac{2 \times 8}{3 \times 8} = \frac{16}{24}$

$\frac{7}{12} = \frac{7 \times 2}{12 \times 2} = \frac{14}{24}$ $\quad \frac{1}{4} = \frac{1 \times 6}{4 \times 6} = \frac{6}{24}$

Since $6 < 9 < 14 < 16$

So, $\frac{1}{4} < \frac{3}{8} < \frac{7}{12} < \frac{2}{3}$ is the ascending order.

b. $\frac{3}{12}$, $\frac{7}{8}$, $\frac{2}{4}$, $\frac{2}{6}$

2	12, 8, 4, 6
2	6, 4, 2, 3
2	3, 2, 1, 3
3	3, 1, 1, 3
	1, 1, 1, 1

LCM of 12, 8, 4, 6
$= 2 \times 2 \times 2 \times 3 = 24$
Now, by doing each fraction with same denominator, we have

$\frac{3}{12} = \frac{3 \times 2}{12 \times 2} = \frac{6}{24}$ $\quad \frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24}$

$\frac{2}{4} = \frac{2 \times 6}{4 \times 6} = \frac{12}{24}$ $\quad \frac{2}{6} = \frac{2 \times 4}{6 \times 4} = \frac{8}{24}$

Since $6 < 8 < 12 < 21$

So, $\frac{3}{12} < \frac{2}{6} < \frac{2}{4} < \frac{7}{8}$ is the ascending order.

c. $\frac{4}{5}$, $\frac{2}{3}$, $\frac{1}{2}$, $\frac{5}{6}$, $\frac{6}{10}$

2	5, 3, 2, 6, 10
3	5, 3, 1, 3, 5
5	5, 1, 1, 1, 5
	1, 1, 1, 1, 1

LCM of 5, 3, 2, 6, 10
$= 2 \times 3 \times 5 = 30$
Now, by doing each fraction with same denominator, we have

$\frac{4}{5} = \frac{4 \times 6}{5 \times 6} = \frac{24}{30}$ $\quad \frac{2}{3} = \frac{2 \times 10}{3 \times 10} = \frac{20}{30}$

$\frac{1}{2} = \frac{1 \times 15}{2 \times 15} = \frac{15}{30}$ $\quad \frac{5}{6} = \frac{5 \times 5}{6 \times 5} = \frac{25}{30}$

$\frac{6}{10} = \frac{6 \times 3}{10 \times 3} = \frac{18}{30}$

Since $15 < 18 < 20 < 24 < 25$

So, $\frac{1}{2} < \frac{6}{10} < \frac{2}{3} < \frac{4}{5} < \frac{5}{6}$ is the ascending order.

4. Arrange in descending order.

Ans. a. $\frac{3}{10}$, $\frac{2}{5}$, $\frac{7}{15}$

2	10, 5, 15
3	5, 5, 15
5	5, 5, 5
	1, 1, 1

LCM of 10, 5, 15
$= 2 \times 3 \times 5 = 30$

Now, by doing each fraction with same denominator, we have

$\frac{3}{10} = \frac{3 \times 3}{10 \times 3} = \frac{9}{30}$ $\quad \frac{2}{5} = \frac{2 \times 6}{5 \times 6} = \frac{12}{30}$

$\frac{7}{15} = \frac{7 \times 2}{15 \times 2} = \frac{14}{30}$

Since $14 > 12 > 9$

So, $\frac{7}{15} > \frac{2}{5} > \frac{3}{10}$ is the descending order.

b. $\mathbf{\frac{3}{4}}$, $\mathbf{\frac{2}{3}}$, $\mathbf{\frac{5}{8}}$, $\mathbf{\frac{7}{9}}$, $\mathbf{\frac{11}{12}}$

2	4, 3, 8, 9, 12
2	2, 3, 4, 9, 6
2	1, 3, 2, 9, 3
3	1, 3, 1, 9, 3
3	1, 1, 1, 3, 1
	1, 1, 1, 1, 1

LCM of 4, 3, 8, 9, 12
$= 2 \times 2 \times 2 \times 3 \times 3 = 72$
Now, by doing each fraction with same denominator, we have

$\frac{3}{4} = \frac{3 \times 18}{4 \times 18} = \frac{54}{72}$

$\frac{2}{3} = \frac{2 \times 24}{3 \times 24} = \frac{48}{72}$ $\quad \frac{5}{8} = \frac{5 \times 9}{8 \times 9} = \frac{45}{72}$

$\frac{7}{9} = \frac{7 \times 8}{9 \times 8} = \frac{56}{72}$ $\quad \frac{11}{12} = \frac{11 \times 6}{12 \times 6} = \frac{66}{72}$

Since $66 > 56 > 54 > 48 > 45$

So, $\frac{11}{12} > \frac{7}{9} > \frac{3}{4} > \frac{2}{3} > \frac{5}{8}$ is the descending order.

c. $\mathbf{\frac{2}{3}}$, $\mathbf{\frac{1}{5}}$, $\mathbf{\frac{1}{2}}$, $\mathbf{\frac{5}{6}}$

2	3, 5, 2, 6
3	3, 5, 1, 3
5	1, 5, 1, 1
	1, 1, 1, 1

LCM of 3, 5, 2, 6
$= 2 \times 3 \times 5 = 30$
Now, by doing each fraction with same denominator, we have

$\frac{2}{3} = \frac{2 \times 10}{3 \times 10} = \frac{20}{30}$ $\quad \frac{1}{5} = \frac{1 \times 6}{5 \times 6} = \frac{6}{30}$

$\frac{1}{2} = \frac{1 \times 15}{2 \times 15} = \frac{15}{30}$ $\frac{5}{6} = \frac{5 \times 5}{6 \times 5} = \frac{25}{30}$

Since $25 > 20 > 15 > 6$

So, $\frac{5}{6} > \frac{2}{3} > \frac{1}{2} > \frac{1}{5}$ is the descending order.

d. $\frac{\mathbf{2}}{\mathbf{3}}$, $\frac{\mathbf{3}}{\mathbf{5}}$, $\frac{\mathbf{5}}{\mathbf{6}}$, $\frac{\mathbf{3}}{\mathbf{4}}$

2	3, 5, 6, 4
2	3, 5, 3, 2
3	3, 5, 3, 1
5	1, 5, 1, 1
	1, 1, 1, 1

LCM of 3, 5, 6, 4
$= 2 \times 2 \times 3 \times 5 = 60$
Now, by doing each fraction with same denominator, we have

$\frac{2}{3} = \frac{2 \times 20}{3 \times 20} = \frac{40}{60}$ $\frac{3}{5} = \frac{3 \times 12}{5 \times 12} = \frac{36}{60}$

$\frac{5}{6} = \frac{5 \times 10}{6 \times 10} = \frac{50}{60}$ $\frac{3}{4} = \frac{3 \times 15}{4 \times 15} = \frac{45}{60}$

Since $50 > 45 > 40 > 36$

So, $\frac{5}{6} > \frac{3}{4} > \frac{2}{3} > \frac{3}{5}$ is the descending order.

e. $\frac{\mathbf{3}}{\mathbf{8}}$, $\frac{\mathbf{11}}{\mathbf{12}}$, $\frac{\mathbf{15}}{\mathbf{16}}$

2	8, 12, 16
2	4, 6, 8
2	2, 3, 4
2	1, 3, 2
3	1, 3, 1
	1, 1, 1

LCM of 8, 12, 16
$= 2 \times 2 \times 2 \times 2 \times 3 = 48$
Now, by doing each fraction with same denominator, we have

$\frac{3}{8} = \frac{3 \times 6}{8 \times 6} = \frac{18}{48}$ $\frac{11}{12} = \frac{11 \times 4}{12 \times 4} = \frac{44}{48}$

$\frac{15}{16} = \frac{15 \times 3}{16 \times 3} = \frac{45}{48}$

Since $45 > 44 > 18$

So, $\frac{15}{16} > \frac{11}{12} > \frac{3}{8}$ is the descending order.

f. $\frac{1}{8}$, $\frac{5}{12}$, $\frac{2}{6}$, $\frac{3}{4}$

2	8, 12, 6, 4
2	4, 6, 3, 2
2	2, 3, 3, 1
3	1, 3, 3, 1
	1, 1, 1, 1

LCM of 8, 12, 6 and 4
$= 2 \times 2 \times 2 \times 3 = 24$
Now, by doing each fraction with same denominator, we have

$\frac{1}{8} = \frac{1 \times 3}{8 \times 3} = \frac{3}{24}$ $\quad \frac{5}{12} = \frac{5 \times 2}{12 \times 2} = \frac{10}{24}$

$\frac{2}{6} = \frac{2 \times 4}{6 \times 4} = \frac{8}{24}$ $\quad \frac{3}{4} = \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$

Since $18 > 10 > 8 > 3$

So, $\frac{3}{4} > \frac{5}{12} > \frac{2}{6} > \frac{1}{8}$ is the descending order.

Exercise 6 (c)

1. Add.

Ans. a. $\frac{4}{8} + \frac{13}{16}$

$= \frac{4 \times 2 + 13 \times 1}{16}$

$= \frac{8 + 13}{16}$

$= \frac{21}{16} = 1\frac{5}{16}$

b. $3\frac{2}{3} + 1\frac{1}{4}$

$= \frac{11}{3} + \frac{5}{4}$

$= \frac{11 \times 4 + 5 \times 3}{12}$

$= \frac{44 + 15}{12} = \frac{59}{12} = 4\frac{11}{12}$

c. $2\frac{1}{10} + 3\frac{4}{5}$

$= \frac{21}{10} + \frac{19}{5}$

$= \frac{21 \times 1 + 19 \times 2}{10}$

$= \frac{21 + 38}{10} = \frac{59}{10} = 5\frac{9}{10}$

d. $\frac{3}{11} + \frac{2}{5} + \frac{4}{55}$

$= \frac{3 \times 5 + 2 \times 11 + 4 \times 1}{55}$

$= \frac{15 + 22 + 4}{55}$

$= \frac{41}{55}$

e. $1\frac{4}{9} + 2\frac{7}{24} + \frac{23}{36}$

$= \frac{13}{9} + \frac{55}{24} + \frac{23}{36}$

$= \frac{13 \times 8 + 55 \times 3 + 23 \times 2}{72}$

$= \frac{104 + 165 + 46}{72}$

$= \frac{315}{72} = \frac{35}{8} = 4\frac{3}{8}$

f. $3 + 1\frac{4}{9} + 2\frac{2}{3}$

$= \frac{3}{1} + \frac{13}{9} + \frac{8}{3}$

$= \frac{3 \times 27 + 13 \times 3 + 8 \times 9}{27}$

$= \frac{81 + 39 + 72}{27}$

$= \frac{192}{27} = \frac{64}{9} = 7\frac{1}{9}$

2. Subtract.

Ans. a. $\frac{4}{5} - \frac{1}{3}$

$= \frac{4 \times 3 - 5 \times 1}{15}$

$= \frac{12 - 5}{15}$

$= \frac{7}{15}$

b. $2\frac{4}{9} - \frac{5}{12}$

$= \frac{22}{9} - \frac{5}{12}$

$= \frac{22 \times 4 - 5 \times 3}{36}$

$= \frac{88 - 15}{36} = \frac{73}{36} = 2\frac{1}{36}$

c. $3\frac{13}{36} - 1\frac{5}{9}$

$= \frac{121}{36} - \frac{14}{9}$

$= \frac{121 \times 1 - 14 \times 4}{36}$

$= \frac{121 - 56}{36} = \frac{65}{36} = 1\frac{29}{36}$

d. $3\frac{4}{7} - \frac{3}{4}$

$= \frac{25}{7} - \frac{3}{4}$

$= \frac{25 \times 4 - 3 \times 7}{28}$

$= \frac{100 - 21}{28} = \frac{79}{28} = 2\frac{23}{28}$

e. $4\frac{1}{5} - 1\frac{2}{3}$

$= \frac{21}{5} - \frac{5}{3}$

f. $3\frac{3}{8} - 1\frac{3}{4}$

$= \frac{27}{8} - \frac{7}{4}$

$= \frac{21 \times 3 - 5 \times 5}{15}$ $= \frac{27 - 7 \times 2}{8}$

$= \frac{63 - 25}{15} = \frac{38}{15} = 2\frac{8}{15}$ $= \frac{27 - 14}{8} = \frac{13}{8} = 1\frac{5}{8}$

Exercise 6 (d)

Solve :

Ans. 1. Milk bought in the morning = 3 litres

Milk left in the evening = $\frac{5}{8}$ litre

Milk that she used = $\frac{3}{1} - \frac{5}{8}$

$= \frac{3 \times 8 - 5 \times 1}{8}$

$= \frac{24 - 5}{8}$ L $= \frac{19}{8} = 2\frac{3}{8}$ L

So, $2\frac{3}{8}$ L of milk was used during the day.

2. Radha spent on a movie = $\frac{1}{2}$ of her packet money

She spent on pen = $\frac{1}{4}$ of her packet money

She spent total function of her packet money = $\frac{1}{2} + \frac{1}{4}$

$= \frac{1 \times 2 + 1 \times 1}{4}$

$= \frac{2 + 1}{4} = \frac{3}{4}$

Hence, She spent $\frac{3}{4}$ of her packet money over all.

3. Length of rope = $5\frac{1}{2}$ m

Length of rope was cut = $3\frac{2}{3}$ m

Left rope $= 5\frac{1}{2} - 3\frac{2}{3}$

$= \frac{11}{2} - \frac{11}{3}$

$= \frac{11 \times 3 - 11 \times 2}{6}$

$= \frac{33 - 22}{6} = \frac{11}{6}$ m or $1\frac{5}{6}$ m

So, $1\frac{5}{6}$ m of rope was left.

4. Quantity of petrol on Sunday morning $= 6$ L

Petrol left on Sunday night $= 1\frac{1}{4}$ L

Petrol was used on Sunday $= \left(6 - 1\frac{1}{4}\right)^2$

$= \frac{6}{1} - \frac{5}{4}$

$= \frac{6 \times 4 - 5 \times 1}{4}$

$= \frac{24 - 5}{4}$

$= \frac{19}{4}$ L or $4\frac{3}{4}$ L

So, $4\frac{3}{4}$ litre petrol was used on Sunday.

5. Shivani did homework on Saturday $= \frac{3}{8}$

Shivani did homework on Sunday $= \frac{1}{4}$

Total home work she did $= \frac{3}{8} + \frac{1}{4}$

$= \frac{3 \times 1 + 1 \times 2}{8}$

$= \frac{3 + 2}{8} = \frac{5}{8}$

So, she did $\frac{5}{8}$ of the homework over the weekend.

Exercise 6 (e)

1. Find the product and write the answer in lowest form.

Ans. a. $5 \times \frac{12}{20}$

$= \frac{5 \times 12}{20}$

$= \frac{12}{4} = 3$

b. $3 \times 2\frac{2}{15}$

$= \frac{3}{1} \times \frac{32}{15}$

$= \frac{3 \times 32}{15}$

$= \frac{32}{5}$ or $6\frac{2}{5}$

c. $5\frac{1}{8} \times 4$

$= \frac{41}{8} \times 4$

$= \frac{41 \times 4}{8}$

$= \frac{41}{2} = 20\frac{1}{2}$

d. $\frac{11}{24} \times 32$

$= \frac{11 \times 32}{24}$

$= \frac{44}{3}$

$= 14\frac{2}{3}$

e. $6\frac{1}{16} \times 36$

$= \frac{97}{16} \times 36$

$= \frac{97 \times 39}{4}$

$= \frac{873}{4} = 218\frac{1}{4}$

f. $24 \times 3\frac{1}{4}$

$= \frac{24}{1} \times \frac{13}{4}$

$= \frac{24 \times 13}{4}$

$= 6 \times 13 = 78$

g. $\frac{9}{22} \times 33$

$= \frac{9 \times 33}{22}$

$= \frac{9 \times 3}{2}$

$= \frac{27}{2} = 13\frac{1}{2}$

h. $10 \times 2\frac{1}{5}$

$= \frac{10}{1} \times \frac{11}{5}$

$= \frac{10 \times 11}{5}$

$= 2 \times 11 = 22$

2. Find.

Ans. a. $\frac{4}{11}$ **of** 55

$= \frac{4}{11} \times 55$

$= \frac{4 \times 55}{11}$

$= 4 \times 5 = 20$

b. $\frac{4}{15}$ **of** $\frac{20}{21}$

$= \frac{4}{15} \times \frac{20}{21}$

$= \frac{4 \times 20}{15 \times 21}$

$= \frac{4 \times 4}{3 \times 4} = \frac{16}{63}$

c. $1\frac{1}{2}$ **of** $3\frac{4}{5}$

$= \frac{3}{2} \times \frac{19}{5}$

$= \frac{3 \times 19}{2 \times 5}$

$= \frac{57}{10} = 5\frac{7}{10}$

d. $\frac{3}{8}$ **of** 36

$= \frac{3}{8} \times 36$

$= \frac{3 \times 36}{8}$

e. $\frac{24}{25}$ **of** $\frac{35}{36}$

$= \frac{24}{25} \times \frac{35}{36}$

$= \frac{24 \times 35}{25 \times 36}$

f. $\frac{7}{8}$ **of** $\frac{16}{21}$

$= \frac{7}{8} \times \frac{16}{21}$

$= \frac{7 \times 16}{8 \times 21} = \frac{2}{3}$

$= \frac{3 \times 9}{2}$ $= \frac{2 \times 7}{5 \times 3} = \frac{14}{15}$

$= \frac{27}{2} = 13\frac{1}{2}$

3. Multiply and write the answer in lowest form.

Ans. a. $\frac{1}{9} \times \frac{3}{2}$

$= \frac{3}{18}$

$= \frac{1}{6}$

b. $\frac{2}{7} \times \frac{8}{9} \times \frac{3}{4}$

$= \frac{2 \times 8 \times 3}{7 \times 9 \times 4}$

$= \frac{4}{21}$

c. $3\frac{3}{5} \times 5\frac{1}{2}$

$= \frac{18}{5} \times \frac{11}{2}$

$= \frac{18 \times 11}{5 \times 2}$

$= \frac{99}{5} = 19\frac{4}{5}$

d. $1\frac{2}{7} \times 3\frac{4}{5}$

$= \frac{9}{7} \times \frac{19}{5}$

$= \frac{171}{35} = 4\frac{31}{35}$

e. $10\frac{3}{8} \times 3\frac{1}{9}$

$= \frac{83}{8} \times \frac{38}{9}$

$= \frac{83 \times 28}{8 \times 9}$

$= \frac{581}{18} = 32\frac{5}{18}$

f. $\frac{1}{8} \times \frac{1}{6} \times 1\frac{1}{2}$

$= \frac{1 \times 1 \times 3}{8 \times 6 \times 2}$

$= \frac{1}{32}$

g. $1\frac{1}{4} \times \frac{2}{5} \times \frac{4}{5}$

$= \frac{5}{4} \times \frac{2}{5} \times \frac{4}{5}$

$= \frac{5 \times 2 \times 4}{4 \times 5 \times 5} = \frac{2}{5}$

h. $1\frac{1}{2} \times 2\frac{1}{3} \times 3\frac{1}{4}$

$= \frac{3}{2} \times \frac{7}{3} \times \frac{13}{4}$

$= \frac{7 \times 3 \times 13}{2 \times 3 \times 4} = \frac{91}{8} = 11\frac{3}{8}$

Exercise 6 (f)

1. Find the reciprocal (or multiplicative inverse) of each of the following :

Ans. a. The reciprocal (or multiplicative inverse) of $\frac{21}{8}$ is $\frac{8}{21}$.

b. The reciprocal (or multiplicative inverse) of $\frac{12}{17}$ is $\frac{17}{12}$.

c. The reciprocal (or multiplicative inverse) of $\frac{11}{3}$ is $\frac{3}{11}$.

d. The reciprocal (or multiplicative inverse) of $\frac{2}{5}$ is $\frac{5}{2}$.

2. Divide and write the answer in the lowest term :

Ans. a. $\frac{5}{9}$ **by 15**

$= \frac{5}{9} \div \frac{15}{1}$

$= \frac{5}{9} \times \frac{1}{15}$

$= \frac{1 \times 1}{9 \times 3} = \frac{1}{27}$

b. $\frac{12}{13}$ **by 9**

$= \frac{12}{13} \div \frac{9}{1}$

$= \frac{12}{13} \times \frac{1}{9}$

$= \frac{4 \times 1}{13 \times 13} = \frac{4}{39}$

c. $\frac{1}{3}$ **by 4**

$= \frac{1}{3} \div 4$

$= \frac{1}{3} \times \frac{1}{4}$

$= \frac{1}{12}$

d. **6 by 8**

$= 6 \div 8$

$= \frac{6}{1} \times \frac{1}{8}$

$= \frac{6 \times 1}{1 \times 8} = \frac{3}{4}$

e. **48 by** $2\frac{2}{5}$

$= 48 \div \frac{12}{5}$

$= \frac{48}{1} \times \frac{5}{12}$

$= \frac{4 \times 5}{1 \times 12} = 20$

f. **77 by** $\frac{11}{3}$

$= 77 \div \frac{11}{3}$

$= \frac{77 \times 3}{1 \times 11}$

$= 7 \times 3 = 21$

g. **72 by** $\frac{6}{7}$

$= 72 \div \frac{6}{7} = \frac{72 \times 7}{1 \times 6} = 84$

$= 12 \times 7 = 84$

h. $\frac{11}{4}$ **by 55**

$= \frac{11}{4} \div 55 = \frac{11}{4} \times \frac{1}{55}$

$= \frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$

3. Divide the following fractions :

Ans. a. $\frac{5}{9} \div \frac{15}{36}$

$= \frac{5}{9} \times \frac{36}{15}$

b. $\frac{12}{13} \div \frac{1}{52}$

$= \frac{12}{13} \times \frac{52}{1}$

c. $1\frac{2}{11} \div 2\frac{5}{22}$

$= \frac{13}{11} \div \frac{49}{22}$

$= \frac{4}{3} = 1\frac{1}{3}$ $= 12 \times 4 = 48$ $= \frac{13}{11} \times \frac{22}{49}$

$= \frac{13 \times 2}{49} = \frac{26}{49}$

d. $\mathbf{8\frac{2}{5} \div 2\frac{2}{15}}$

$= \frac{42}{5} \div \frac{32}{15}$

$= \frac{42}{5} \times \frac{15}{32}$

$= \frac{63}{16} = 3\frac{15}{16}$

Exercise 6 (g)

Solve these story sums.

Ans. 1. To make 1 chocolate, cocoa is needed $= \frac{3}{4}$ cups

$\therefore$ To make 20 chocolates, cocoa is needed $= \frac{3}{4} \times 20$ cups

$= \frac{3 \times 20}{4} = 15$ cups

So, 15 cups cocoa powder is required to make 20 chocolates.

2. A truck covered distance in 1 hr $= 60\frac{1}{2}$ km

$\therefore$ A truck covered distance in $4\frac{2}{5}$ hrs $= \left(60\frac{1}{2} \times 4\frac{2}{5}\right)$km

$= \left(\frac{121}{2} \times \frac{22}{5}\right)$km

$= \frac{1331}{5} = 266\frac{1}{5}$ km

So, It will travel $266\frac{1}{5}$ km in $4\frac{2}{5}$ hours.

3. The cost of $3\frac{1}{2}$ kg of mangoes $=$ ₹ $157\frac{1}{2}$

So, cost of 1 kg of mangoes $= ₹\ 157\frac{1}{2} \div 3\frac{1}{2}$

$= ₹\ \frac{315}{2} \div \frac{7}{2}$

$= ₹\ \frac{315}{2} \times \frac{2}{7} = ₹\ 45$

So, the cost of 1 kg of mangoes is ₹ 45

4. Paint needed for 1 square metre of wall $= 2\frac{3}{4}$ L

Paint needed for $3\frac{1}{2}$ square metre of wall $= \left(2\frac{3}{4} \times 3\frac{1}{2}\right)$ L

$= \left(\frac{11}{4} \times \frac{7}{2}\right)$ L

$= \frac{77}{8}$ L $= 9\frac{5}{8}$ L

So, $9\frac{5}{8}$ L of paint is needed for $3\frac{1}{2}$ square metre of the wall.

5. Total length of rope $=$ 30 m

length of each piece $= 2\frac{1}{2}$ m

$\therefore$ No. of pieces $= 30 \div 2\frac{1}{2}$

$= 30 \div \frac{5}{2}$

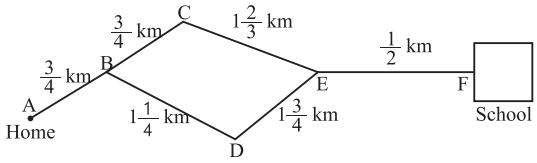
$= \frac{30}{1} \times \frac{2}{5} = 12$ pieces

So, Sumit will get 12 pieces of rope.

NEP

Collaboration

Ans. Ravi travels the longest route.



There are two routes to school. Ravi and Naina cycle to school everyday. Ravi takes the route ABDEF and Naina takes the other. Who travels the lesser distance to reach school? **Naina**

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. **1.** a **2.** a **3.** c **4.** b **5.** d

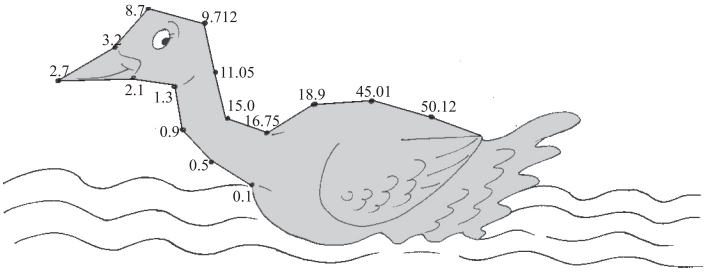
Chapter 7

Decimals

Let's Recall

Joni the dots in ascending order and complete the picture. Colour it:

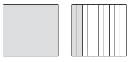
Ans.



Exercise 7 (a)

1. Complete the table for the coloured part :

Ans.

	Coloured Parts	Decimal form	Read as
a.		1.2	One point two
b.		2.34	Two point three four

2. Write the decimals :

Ans. a. 0.5 b. 3.34 c. 200.001
d. 39.637 e. 1000.8 f. 0.006

3. Write in words :

Ans. a. Zero point nine four three b. Forty-one point zero seven
c. Nine point zero zero eight
d. Fifty-eight point zero seven six
e. Zero point six f. Eight point seven three

4. Write the place value of the circled digits :

Ans. a. 70 b. 2 c. $\frac{6}{100} = 0.06$ d. $\frac{0}{10} = 0$

5. Write in the expanded form :

Ans. a. **57.69** = $50 + 7 + \frac{6}{10} + \frac{9}{100}$ b. **24.306** = $20 + 4 + \frac{3}{10} + \frac{6}{1000}$

c. **130.456** = $100 + 30 + \frac{6}{10} + \frac{5}{100} + \frac{6}{1000}$

d. **99.075** = $90 + 9 + \frac{7}{100} + \frac{5}{1000}$

6. Write the following in the short form :

Ans. a. 2.3 b. 15.37 c. 372.09

Exercise 7 (b)

1. Express in the fractional form :

Ans. a. **0.67** = $\frac{67}{100}$

b. **24.455** = $\frac{24455}{1000} = \frac{4891}{200}$

c. **811.53** = $\frac{81153}{100}$

d. **1426.25** = $\frac{142625}{100} = \frac{5705}{4}$

e. **29.380** = $\frac{29380}{1000} = \frac{2938}{100}$ or $\frac{1469}{50}$

f. **71.0053** = $\frac{710053}{10000}$

g. **0.837** = $\frac{837}{1000}$

h. **1.483** = $\frac{1483}{1000}$

2. Write the following in decimal form :

Ans. a. $\frac{20}{100}$ = 0.2 b. $\frac{8}{10}$ = 0.8 c. $\frac{36}{1000}$ = 0.036 d. $\frac{8}{10000}$ = 0.0008

e. $\frac{575}{1000}$ = 0.575 f. $\frac{384}{10}$ = 38.4 g. $\frac{3846}{100}$ = 38.46 h. $\frac{3941}{1000}$ = 3.941

3. Circle the unlike fractions :

Ans. a. 0.071, 1.001, **56.01**, 561.008 b. 8.6, **5.38**, 23.1, 11.4

c. 14.99, 9.62, **483.3**, 15.34 d. **6.8**, 5.08, 5.81, 61.01

4. Write the equivalent decimals :

Ans. a. 0.8 = 0.80 = **0.800** b. 1.5 = 1.50 = **1.500**

c. 3.9 = **3.90** = **3.900** d. **0.5** = 0.50 = 0.500

5. Fill in the blanks using <, > or = :

Ans. a. 54.7 > 35.7 b. 59.075 < 59.75 c. 6.8 > 6.5

d. 8.03 > 8.003 e. 9.10 = 9.1 f. 7.003 < 7.03

6. Arrange the following decimals in the ascending order :

Ans. a. **11.1, 11.21, 11.001**
Ascending order : 11.001 < 11.1 < 11.21

b. **20.3, 30.2, 23.25**
Ascending order : 20.3 < 23.25 < 30.2

c. **9.82, 9.9, 9.795**
Ascending order : 9.795 < 9.82 < 9.9

d. **8.86, 8.094, 8.9**
Ascending order : 8.094 < 8.86 < 8.9

7. Arrange the following in descending order :

Ans. a. **0.046, 4.06, 4.36, 4.236**
Descending order : 4.36 > 4.236 > 4.06 > 0.046

b. **6.38, 6.234, 16.234, 31.46**
Descending order : 31.46 > 16.234 > 6.38 > 6.234

c. **48.231, 46.236, 1.64, 36.23**
Descending order : 48.231 > 46.236 > 36.23 > 1.64

d. **69.84, 7.68, 7.063, 16.09**
Descending order : 69.84 > 16.09 > 7.68 > 7.063

Exercise 7 (c)

1. Find the sum or difference :

Ans. a.
$$\begin{array}{r} 27.5 \\ +\ 51.9 \\ \hline 79.4 \end{array}$$

b.
$$\begin{array}{r} 55.305 \\ +\ 165.290 \\ \hline 220.595 \end{array}$$

c.
$$\begin{array}{r} 242.518 \\ -\ 139.506 \\ \hline 103.012 \end{array}$$

d.
$$\begin{array}{r} 220.5 \\ -\ 160.365 \\ \hline 60.135 \end{array}$$

2. Add :

Ans. a. **17.2 and 5.2**
= 17.2 + 5.2
= 22.4

$$\begin{array}{r} 17.2 \\ +\ 05.2 \\ \hline 22.4 \end{array}$$

b. **11.4 + 0.86 + 29.55**
= 41.81

$$\begin{array}{r} 11.40 \\ 00.86 \\ +\ 29.55 \\ \hline 41.81 \end{array}$$

c. **17.80 + 15.50 + 85.96**
= 119.26

$$\begin{array}{r} 17.80 \\ 15.50 \\ +\ 85.96 \\ \hline 119.26 \end{array}$$

d. **1.001 + 2.92 + 0.00292**
= 3.92392

$$\begin{array}{r} 1.001 \\ 2.920 \\ +\ 0.00292 \\ \hline 3.92392 \end{array}$$

e. **7.65 + 19.15 + 0.75**
= 27.55

$$\begin{array}{r} 7.65 \\ 19.15 \\ +\ \ 0.75 \\ \hline 27.55 \end{array}$$

f. **15.967 + 13.293 + 5.005**
= 34.265

$$\begin{array}{r} 15.967 \\ 13.293 \\ +\ 5.005 \\ \hline 34.265 \end{array}$$

3. Subtract :

Ans. a. **15.963 – 13.89**
= 2.073

$$\begin{array}{r} 15.963 \\ -\ 13.890 \\ \hline 2.073 \end{array}$$

b. **37.750 – 25.850**
= 11.90

$$\begin{array}{r} 37.750 \\ -\ 25.850 \\ \hline 11.90 \end{array}$$

c. **9 – 7.473**
= 1.527

$$\begin{array}{r} 9.000 \\ -\ 7.473 \\ \hline 1.527 \end{array}$$

d. **113 – 14.101**
= 98.899

$$\begin{array}{r} 113.000 \\ -\ 14.101 \\ \hline 98.899 \end{array}$$

e. **18.95 – 15.86**
= 3.09

$$\begin{array}{r} 18.95 \\ -\ 15.86 \\ \hline 3.09 \end{array}$$

f. **56.813 – 27.303**
= 29.510

$$\begin{array}{r} 56.813 \\ -\ 27.303 \\ \hline 29.510 \end{array}$$

g. **63.125 – 28.350**
= 34.775

```
 63.125
–28.350
 34.775
```

h. **70 – 45.904**
= 24.096

```
 70.000
–45.904
 24.096
```

i. **400 – 350.937**
= 49.063

```
400.000
–350.937
 49.063
```

Worksheet

Place the decimal point at the correct position in the following products.

Ans. a. 6.3 × 5 = **31.5**
b. 16 × 2.47 = **39.52**
c. 12 × 3.062 = **36.744**
d. 6.75 × 3.8 = **25.650**
e. 10.62 × 6.21 = **65.9502**
f. 9.534 × 14.7 = **140.1498**

Exercise 7 (d)

1. Multiply :

Ans. a. 19.09 × 10 = **190.9**
b. 6.25 × 10 = **62.5**
c. 0.2345 × 100 = **23.45**
d. 3.835 × 100 = **383.5**
e. 28.625 × 1000 = **28625**
f. 0.05 × 1000 = **50**

2. Find the product :

Ans. a. **8.6 × 1.4**
= 12.04

```
  8.6
×1.4
 3.44
 8.6×
12.04
```

b. **36.5 × 5**
= 182.5

```
 36.5
×  5
182.5
```

c. **0.75 × 0.29**
= 0.2175

```
 0.75
×0.29
0.0675
0.150×
0.2175
```

d. **0.478 × 17.6**
= 8.4128

```
 0.478
×17.6
0.2868
3.346×
4.78××
8.4128
```

e. **11.11 × 92**
= 1022.12

```
 11.11
×  92
 22.22
999.9×
1022.12
```

f. **5.2125 × 19**
= 99.0375

```
 5.2125
×   19
46.9125
52.125×
99.0375
```

Exercise 7 (e)

Ans. 1. Madhu had money = ₹100.00
She bought a baseball for = – ₹ 75.75
Money left with her = **₹24.25**

So, she have ₹24.25 left with her.

2. It rained on Monday = 3.5 cm
It rained on Tuesday = 2.25 cm
It rained on Wednesday = + 1.75 cm
Total amount of rain = **7.50 cm**

It rained 7.50 cm in three days.

3. Cost of 1 litre of petrol = ₹75.50
∴ Cost of 4 litres of petrol = 4 × 75.50=₹302
So, the cost of 4 litres of petrol is ₹302.

```
  75.50
×     4
--------
 302.00
```

4. Sushant had money in his pocket = ₹ 55.50
He spent money = – ₹ 27.00
Money left with him = **₹ 28.50**
He has ₹28.50 left with him.

5. Cost of 1 toy = ₹ 25.35
Cost of 45 toys = ₹ 25.35 × 45
= **₹ 1140.75**
So, the cost of 45 toys will be ₹1140.75.

```
  25.35
×   45
--------
 126.75
1014.0×
--------
1140.75
```

6. A bike covers distance in 1 hour = 40.5 km
It covers distance in 18 hours = 40.5 × 18
= 729 km
So, the bike will cover 729 km in 18 hours.

```
  40.5
×   18
--------
 324.0
405.×
--------
729.0
```

7. Product of two numbers = 4832.25
One no. = 25
∴ Other no. = 4832.25 ÷ 25
= 193.29
So, other no. is 193.29.

```
25)4832.25(193.29
 -25
 ----
  233
 -225
 ----
   82
  -75
 ----
    72
   -50
 ----
    225
   -225
 ----
      x
```

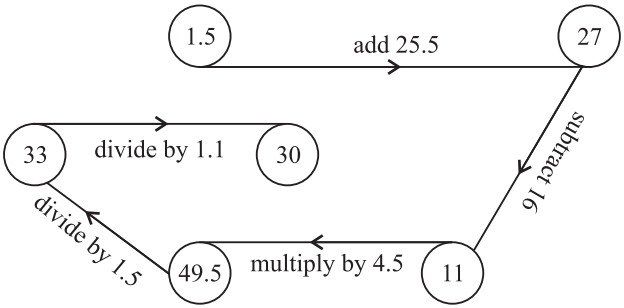
8. The cost of 25 chocolates = ₹ 63.50
∴ Cost of one chocolate = ₹ 63.50 ÷ 25
= ₹ 2.54
So, the cost of one chocolate is ₹2.54.

```
25) 63.50 (2.54
  -50
  ----
   135
  -125
  ----
    100
   -100
  ----
      x
```

NEP Communication

Follow the arrow marks and simplify the following as indicated to fill in the blanks.

Ans.



Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. d 3. a

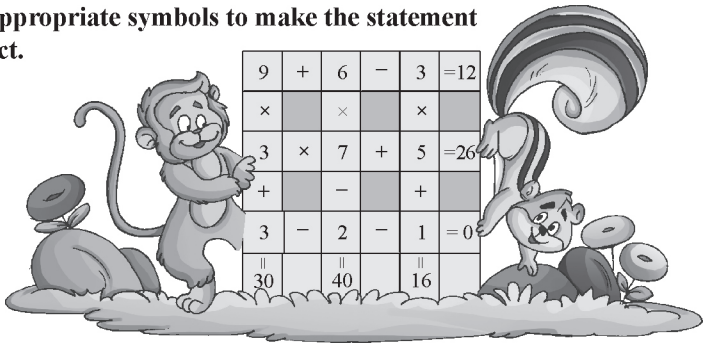
Chapter

8 Simplification

Let's Recall

Use appropriate symbols to make the statement correct.

Ans.



Exercise 8 (a)

1. Simplify :

Ans. a. **20 + 16 ÷ 2**
= 20 + 8 = 28

b. **28 – 16 ÷ 4**
= 28 – 4 = 24

c. **18 ÷ 3 – 2**
= 6 – 2 = 4

d. **7 × 9 × 1 – 54 ÷ 6**
= 7 × 9 × 1 – 9
= 63 – 9 = 54

e. **60 × 2 + 18 ÷ 2 – 43**
= 60 × 2 + 9 – 43
= 120 + 9 – 43
= 129 – 43 = 86

f. **56 ÷ 4 + 12 × 2**
= 14 + 12 × 2
= 14 + 24 = 38

g. $3\frac{1}{2} + 2\frac{1}{3} - 4$

$= \frac{7}{2} + \frac{7}{3} - \frac{4}{1}$

$= \frac{7 \times 3 + 7 \times 2 - 4 \times 6}{6}$

$= \frac{21 + 14 - 24}{6} = \frac{35 - 24}{6} = \frac{11}{6} = 1\frac{5}{6}$

h. **29.236 × 10 – 17.95 + 4.8**
= 292.36 – 17.95 + 4.8
= 292.36 + 4.8 – 17.95
= 297.16 – 17.95
= 279.21

2. Fill in the correct symbol +, –, × or ÷ to make the sum correct :

Ans. a. $6 \div 2 \ (-)\ 1 = 2$ b. $8 \times 3 \ (-)\ 6 \div 2 = 21$

c. $15 \times 4 \ (+)\ 24 \div 3 = 68$ d. $6 + 8 - 42 \ (\div)\ 6 = 7$

e. $15 \ (\div)\ 5 + 4 = 7$ f. $4 \times 3 \ (+)\ 2 = 14$

Exercise 8 (b)

1. Simplify using BODMAS rule and fill in the blanks :

Ans. a. **$3 + [\{(4 \div 4) + 1\} \times 8$**
$= 3 + [\{1 + 1\} \times 8]$
$= 3 + [2 \times 8]$
$= 3 + 16 = 19$

b. **$\{32 - (15 + 7)\} \times 2$**
$= \{32 - 22\} \times 2$
$= 10 \times 2$
$= 20$

c. **$64 \div 16 \times (3 + 2)$**
$= 64 \div 16 \times 5$
$= 4 \times 5 = 20$

d. **$\{5 + (48 \div 12)\} - 2 \times 3$**
$= \{5 + 4\} - 2 \times 3$
$= 9 - 2 \times 3 = 9 - 6 = 3$

e. **$17 + [8 - \{5 + (10 \div 5)\}]$**
$= 17 + [8 - \{5 + 2\}]$
$= 17 + [8 - 7]$
$= 17 + 1 = 18$

f. **$[32 + \{44 - (32 \div 4)\}]$**
$= [32 + \{44 - 8\}]$
$= [32 + 36] = 68$

g. $\left(\frac{2}{5} \times \frac{12}{14}\right) \div \frac{3}{4}$

$= \frac{12}{35} \div \frac{3}{4} = \frac{12}{35} \times \frac{4}{3} = \frac{16}{35}$

h. **$[(2.321 + 125.779) - 6.109 \times 9.54]$**
$= [128.100 - 6.109 \times 9.54]$
$= [128.100 - 58.27986] = 69.82014$

2. Simplify the following problems :

Ans. a. **$(32768 \div 64) \div 64$**
$= 512 \div 64 = 8$

b. **$2800 - 400 \times (350 \div 50)$**
$= 2800 - 400 \times 7$
$= 2800 - 2800 = 0$

c. **$9210 + 648 \div 8 \times (2015 - 999)$**
$= 9210 + 648 \div 8 \times 1016$
$= 9210 + 81 \times 1016$
$= 9210 + 82296 = 91506$

d. **892 × 65 – 15 × 632 + 4,709**

= 57980 – 9480 + 4709 = 57980 + 4709 – 9480

= 62689 – 9480 = 53209

e. **(10146 ÷ 19) ÷ 2 + 15 × 48 – 400 + 100**

= 534 ÷ 2 + 15 × 48 – 400 + 100

= 267 + 15 × 48 – 400 + 100 = 267 + 720 – 400 + 100

= 267 + 720 + 100 – 400 = 1087 – 400 = 687

f. **684 ÷ 12 × 132 – 32 + 520 ÷ 10**

= 57 × 132 – 32 + 52 = 7524 – 32 + 52

= 7524 + 52 – 32 = 7576 – 32 = 7544

g. $1\frac{1}{3} \div \frac{5}{6} \times 1\frac{1}{2} - \frac{2}{7}$

$= \frac{4}{3} \div \frac{5}{6} \times \frac{3}{2} - \frac{2}{7} = \frac{4}{3} \times \frac{6}{5} \times \frac{3}{2} - \frac{2}{7}$

$= \frac{12}{5} - \frac{2}{7} = \frac{12 \times 7 - 2 \times 5}{35} = \frac{84 - 10}{35} = \frac{74}{35} = 2\frac{4}{35}$

h. **[0.25 × 0.47 ÷ 0.5 + 5.320 – 5]**

= 0.25 × 0.94 + 5.320 – 5 = 0.235 + 5.320 – 5

= 5.555 – 5 = 0.555

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. c 2. a 3. c 4. a

NEP

Critical Thinking

Simplify the following sums and match the answer with correct sum.

Ans.

a. $40 \div 2 + 1$

b. $1.2 + 1.2 \div 0.2$

c. $6 + \frac{1}{3}$ of 6

d. $10 \div 5 \times 3$

e. $999 \div [56 \div \{53 + (19 - 16)\}]$

f. $5\frac{1}{2} \div \left[\left\{\frac{1}{4} - \left(\frac{1}{6} - \frac{1}{30}\right)\right\} + \frac{1}{15}\right]$

7.2

8

21

6

30

999

Chapter

9 Measurement

Let's Recall

1. Fill in the blanks after conversion :

Ans. a. Height of a side table  $= \frac{1}{2}$ m $=$ **50** cm.

b. Weight of some mangoes  $=$ 2500 g $=$ **2.5** kg.

c. A bottle of water  $=$ 2.5 L $=$ **2500** mL

Exercise 9 (a)

1. Convert the following metric measures :

Ans. a. **4 dam to cm**
$=$ 4 dam
$=$ 4 × 1000 cm
$=$ 4000 cm

b. **13 km to dm**
$=$ 13 km
$=$ 13 × 10000 dm
$=$ 130000 dm

c. **7 g to mg**
$=$ 7 g
$=$ 7 × 1000 mg
$=$ 7000 mg

d. **22 hg to g**
$=$ 22 hg
$=$ 22 × 100 g
$=$ 2200 g

e. **36 L to cL**
$=$ 36 L
$=$ 36 × 100 cL
$=$ 3600 cL

f. **9 daL to dL**
$=$ 9 daL
$=$ 9 × 100 dL
$=$ 900 dL

2. Convert and express your answer in decimals :

Ans. a. **38 dam 46 cm to dam**
$=$ 38 dam + 46 cm
$= 38 \text{ dam} + \frac{46}{1000} \text{ dam}$
$=$ 38 + 0.046 dam
$=$ 38.046 dam

b. **8 hm 350 dm to hm**
$=$ 8 hm + 350 dm
$= 8 \text{ hm} + \frac{350}{1000} \text{ hm}$
$=$ 8 hm + 0.350 hm
$=$ 8.350 hm

c. **17 dg 6 mg to dg**

$= 17 \text{ dg} + 6 \text{ mg}$

$= 17 \text{ dg} + \frac{6}{10} \text{ dg}$

$= 17 \text{ dg} + 0.6 \text{ dg}$

$= 17.6 \text{ dg}$

d. **23 dag 96 cg to dag**

$= 23 \text{ dag} + 96 \text{ cg}$

$= 23 \text{ dag} + \frac{96}{1000} \text{ dag}$

$= 23 \text{ dag} + 0.096 \text{ dag}$

$= 23.096 \text{ dag}$

e. **30 dL 5 mL to dL**

$= 30 \text{ dL } 5 \text{ mL}$

$= 30 \text{ dL} + \frac{5}{100} \text{ dL}$

$= 30 \text{ dL} + 0.05 \text{ dL}$

$= 30.05 \text{ dL}$

f. **16 kL 35 L to L**

$= 16\text{kL} + 35 \text{ L}$

$= 16 \times 1000 \text{ L} + 35 \text{ L}$

$= 16000 \text{ L} + 35 \text{ L}$

$= 16035 \text{ L}$

Exercise 9 (b)

1. Add :

Ans. a.

m	cm
121	13
97	05
+21	21
239	39

b.

m	cm
219 .	70
85 .	39
+ 2 .	73
307 .	82

c.

km	m
13	583
10	005
+15	026
38	614

d.

km	m
	4 . 000
	8 . 099
+ 14 .	586
	26 . 685

2. Subtract :

Ans. a.

86.85	m
– 52.39	m
34.46	m

b.

10.000	km
– 3.965	km
6.035	km

c.

39.7	cm
– 21.9	cm
7.8	cm

d.

km	m
11	527
– 9	075
2	452

3. Add the following. Give your answer in kg :

Ans. a.

	6315 g
	2817 g
+	178 g
	9310 g

= 9.310 kg

b.

kg	g
5	025
	835
+ 12	005
17	865

= 17.865 kg

c.

kg	g
18	706
75	009
+ 13	091
106	806

= 106.865 kg

d.

kg	g
13	325
12	000
+ 14	981
40	306

= 40.306 kg

4. Subtract :

Ans. a.

	9.690 kg
–	6.750 kg
	2.940 kg

b.

g	mg
18	690
– 12	150
6	540

c.

kg	g
18	500
– 9	750
8	750

d.

kg	g
3	160
–	390
2	770

5. Add :

Ans. a.

L	mL
3	275
8	685
+14	500
26	460

b.

L	mL
1	450
80	692
+ 3	721
85	863

c.

L	mL
6	498
14	506
+ 7	098
28	102

d.

L	mL
25	050
7	009
+ 9	931
41	990

6. Subtract :

Ans. a.

L	mL
17	000
– 15	396
1	604

b.

L	mL
2	630
–	985
1	645

c.

L	mL
21	000
– 18	215
2	785

d.

L	mL
19	780
– 12	319
7	461

Higher order Thinking Skills (HOTS)

Ans. 1 m 62 cm

Exercise 9 (c)

1. Multiply :

Ans. a.

25.98	dm
× 3	
77.94	dm

b.

36.9	cm
× 5	
184.5	cm

c.

1.683	km
× 9	
15.147	km

d.

20.806 kg	
× 17	
145.642	
+ 208.06 ×	
353.702	

e.

kg	hg	dag	g
4	2	6	5
		×	7
2	9	8	5	5

f.

323 mL
× 9
2907 mL

2. Divide :

Ans. a.

4) 39.6 (9.9
– 36
36
– 36
x

So, 39.6 m ÷ 4
= 9.9 m

b.

8) 0.01864 (0.00233
– 16
26
– 24
24
– 24
x

So, 0.81864 km ÷ 8
= 0.00233 km or 2.33 m

c.

16) 18.6 (1.1625
– 16
26
– 16
100
– 96
40
– 32
80
– 80
x

So, 18.6 km÷16
= 1.1625 km

d.

11) 81.312 (7.392
– 77
43
– 33
101
– 99
22
– 22
x

So, 81.312 L ÷ 11
= 7.392 L

e.

9) 16.398 (1.822
– 9
73
– 72
19
– 18
18
– 18
x

So, 16.398 ÷ 9
= 11.822 L

f.

11) 97.042 (8.822
– 88
90
– 88
24
– 22
22
– 22
x

So, 97.042 L ÷ 11
=8.822 L

Exercise 9 (d)

Ans. 1. Saurabh's height = 158.9 cm
Rohit's height = 118.5 cm
Since 158.9 > 118.5
So, Saurabh is taller than Rohit by 40.4 cm.

```
158.9 cm
– 118.5 cm
40.4 cm
```

2. Weight of potatoes = 4 kg 200 g
Weight of brinjals = 2 kg 800 g
Weight of tomatoes = + 5 kg 750 g
Total Vegetables = **12 kg 750 g**
So, 12 kg 750 of vegetables bought by Maya.

3. Cloth required for one shirt = 2.25 m
So, cloth required for 17 shirts = 2.25 m × 17
= 38.25 m
So, 38.25 m of cloth is required for 17 shirts.

```
  2.25
 ×17
15.75
22.50
38.25
```

4. Petrol stored in 32 tanks = 4242.56 L
So, petrol stored in 1 tank = 4242.56 L ÷ 32
= 132.58 L
So, 132.58 L of oil is stored in each tank.

```
32) 4242.56 (132.58
  – 32
   104
  – 96
    82
  – 64
   185
  – 160
    256
  – 256
     x
```

5. Amount of tea packed in 45 packets = 49 kg 950 g
So, amount of tea in 1 packet = 49 kg 950 g ÷ 45
or = (49950 ÷ 45) g
= 1110 g
= 1.110 kg
or = 1 kg 110 g

```
45) 49950 (1110
  – 45
   49
  – 45
    45
  – 45
     0
   – 0
     x
```

6. Weight of apples = 2 kg 350 g
Weight of papayas = 4 kg 825 g
Weight of strawberries = + 3 kg 475 g
Total weight of fruits = **10 kg 650 g**
So, Dhruv bought 10 kg 650 g of fruits.

7. A person travels in 4 days by car = 1582.4 km
So, he travels in 1 day by car = (1582.4 ÷ 4) km
= 395.6 km

```
4)1582.4(395.6
 -12
  38
 -36
   22
  -20
    24
   -24
     x
```

So, he travelled 395.6 km in 1 day.

8. Cloth required for curtains = 4.75 m
Cloth required for cushion cover = + 5.85 m
= **10.60 m**
So, total 10.60 m of cloth is required.

9. Weight of 25 toffees = 275 g
So, weight of 1 toffee = (275 ÷ 25) g
So, weight of 80 toffees = (275 ÷ 25) × 80 g
(11 × 80) g = 880 g
So, Weight of 80 toffees is 880 g.

10. Length of one saree = 5.672 m
So, length of 50 sarees = 5.672 × 50 m
= 283.60 m

```
  5.672 m
    ×50
 283.60 m
```

So, the length of 50 sarees is 283.60 m.

11. Milk required for sweets = 17.950 L
Milk required for curd = 18.695 L
Milk required for tea = + 5.165 L
Total milk required = **41.810 L**
So, Shop required 41.810 L of milk.

12. Road was constructed
in 30 days = 28.500 km
So, road was
constructed in 1 days = 28.500 km ÷ 30
= 0.950 km
or 950 m
So, 950 m road was constructed in 1 day.

$$\begin{array}{r} 30\overline{)28.500}\,(0.950 \\ -270 \\ \hline 150 \\ -150 \\ \hline 0 \\ -0 \\ \hline x \end{array}$$

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. c 3. c

NEP Life Skill and Values

Fill in the blanks with the correct unit :

a. A book of weight 250 **grams**.

b. The capacity of medicine bottle is 150 **millilitre**.

c. Rohan's weight is 28 **kilograms**.

d. The distance between cities A and B is 750 **kilometres**.

e. The length of the pencil is 17 **centimetre**.

f. The quantity of milk in 3 packets is 1.5 **Litre**.

Chapter 10

Time and Temperature

Let's Recall

Ans. 1. 

14:00 hours

2. 

18 : 00 hours

3. 

21 : 30 hours

Worksheet

1. Change into hours and minutes.

Ans. a. 310 min = **5 hours 10 min** b. 500 min = **8 hours 20 min**

c. 670 min = **11 hours 10 min**

2. Change into minutes and seconds.

Ans. a. 400 sec. = **6 min 40 sec** b. 920 sec. = **15 min 20 sec**

c. 1010 sec. = **16 min 50 sec**

Exercise 10 (a)

1. Change into seconds :

Ans. a. **56 minutes**
= 56 × 60 sec.
= 3360 sec.

b. **13 minutes**
= 13 × 60 sec.
= 780 sec.

c. **14 minutes 40 seconds**
= 14 × 60 sec + 40 sec.
= 840 sec + 40 sec.
= 880 sec.

d. **9.5 minutes**
= 9.5 × 60 sec.
= 570 sec.

e. $\mathbf{5\frac{1}{2}}$ **minutes**
$= \frac{11}{2}$ minutes
$= \frac{11}{2} \times 60$ sec. = 330 sec.

f. **66 minutes 13 seconds**
= 66 × 60 sec. + 13 sec.
= (3960 + 13) sec.
= 3973 sec.

2. Change into minutes :

Ans. a. **7 hours**
= 7 × 60 min.
= 420 min.

b. **5 hours**
= 5 × 60 min.
= 300 min.

c. **19 hours 10 minutes**
= 19 × 60 min. + 10 min.
= 1140 min. + 10 min.
= 1150 min.

d. **6 hours 40 minutes**
= (6 × 60 min + 40 min)
= (360 + 40) min.
= 400 min.

e. **13.5 hours**
= 13.5 × 60 min.

f. $\mathbf{11\frac{1}{2}}$ **hours**
$= \frac{23}{2}$ hours

$= 810$ min. $= \frac{23}{2} \times 60$ min. $= 690$ min.

3. Convert into minutes and seconds :

Ans. a. **225 seconds**

$= \frac{225}{60}$ min.

$60\overline{)225}\,(3$ min.
-180
45 sec.

$= 3$ min. 45 sec.

b. **360 seconds**

$= \frac{360}{60}$ min.

$60\overline{)360}\,(6$ min.
-360
x

$= 6$ min.

c. **381 seconds**

$= \frac{381}{60}$ min.

$60\overline{)381}\,(6$ min.
-360
21 sec.

$= 6$ min. 21 sec.

d. **2406 seconds**

$= \frac{2406}{60}$ min.

$60\overline{)2406}\,(40$ min.
-240
06
-06
6 sec.

$= 40$ min. 6 sec.

e. **1800 seconds**

$= \frac{1800}{60}$ min.

$60\overline{)1800}\,(30$ min.
-180
0
-0
x

$= 30$ min.

f. **1760 seconds**

$= \frac{1760}{60}$ min.

$60\overline{)1760}\,(29$ min.
-120
560
-540
20 sec.

$= 29$ min.20 sec.

4. Convert into hours and minutes :

Ans. a. **108 minutes**

$= \frac{108}{60}$ hours

$60\overline{)108}\,(1$ hr.
-60
48 min.

$= 1$ hr 48 min.

b. **840 minutes**

$= \frac{840}{60}$ hours

$60\overline{)840}\,(14$
-60
240
-240
x

$= 14$ hours.

c. **600 minutes**

$= \frac{600}{60}$ hours

$60\overline{)600}\,(10$
-60
0
-0
x

$= 10$ hours.

d. **788 minutes**

$= \frac{788}{60}$ hours

$$\begin{array}{r} 60\overline{)788}(13 \\ -60 \\ \hline 188 \\ -180 \\ \hline 8 \end{array}$$

$=$ 13 min. 8 sec.

e. **100 minutes**

$= \frac{100}{60}$ hours

$$\begin{array}{r} 60\overline{)100}(1 \text{ hr.} \\ -60 \\ \hline 40 \text{ min.} \end{array}$$

$=$ 1 hour 40 min.

f. **520 minutes**

$= \frac{520}{60}$ hours

$$\begin{array}{r} 60\overline{)520}(8 \text{ hr.} \\ -480 \\ \hline 40 \text{ min.} \end{array}$$

$=$ 8 hours 40 min.

5. Convert into hours :

Ans. a. **18 days**

$= 18 \times 24$ hours

$= 432$ hours

b. **7 days**

$= 7 \times 24$ hours

$= 168$ hours

c. **14 days**

$= 14 \times 24$ hours

$= 336$ hours

d. **9.5 days**

$= 9.5 \times 24$ hours

$= \frac{19}{2} \times 24$ hours

$= 228$ hours

e. **28.5 days**

$= 28.5 \times 24$ hours

$= \frac{57}{2} \times 24$ hours

$= 684$ hours

f. **$5\frac{1}{2}$ days**

$= \frac{11}{2}$ days

$= \frac{11}{2} \times 24$ hours

$= 132$ hours

6. Convert :

Ans. a. **636 minutes into hours and minutes**

$=$ 636 min.

$= \frac{636}{60}$ hours

$$\begin{array}{r} 60\overline{)636}(10 \\ -60 \\ \hline 36 \\ -00 \\ \hline 36 \end{array}$$

$=$ 10 hours 36 min.

b. **360 seconds into minutes and seconds**

$=$ 360 sec.

$= \frac{360}{60}$ min.

$$\begin{array}{r} 60\overline{)360}(6 \\ -360 \\ \hline x \end{array}$$

$=$ 6 minutes.

c. **55 hours into days and hours**

= 55 hours

= $\frac{55}{24}$ days

$$\begin{array}{r} 24\overline{)55}\,(2 \\ -48 \\ \hline 7 \end{array}$$

= 2 days 7 hours.

d. **765 days into years and days**

= 765 days

= $\frac{765}{365}$ years

$$\begin{array}{r} 365\overline{)765}\,(2 \\ -730 \\ \hline 35 \end{array}$$

= 2 years 35 days

e. **54 months into years and months**

= 54 months

= $\frac{54}{12}$ years

$$\begin{array}{r} 12\overline{)54}\,(4 \\ -48 \\ \hline 6 \end{array}$$

= 4 years 6 months

f. **96 weeks into months**

= 96 weeks

= $\frac{96}{4}$ months

$$\begin{array}{r} 4\overline{)96}\,(24 \\ -8 \\ \hline 16 \\ -16 \\ \hline x \end{array}$$

= 24 months.

Exercise 10 (b)

1. Add :

Ans. a.

hour	min
48	44
+ 29	26
78	10

b.

min	sec
18	33
+ 30	42
49	15

c.

hour	min	sec
7	40	37
+ 2	27	38
10	08	15

d.

hour	min	sec
17	40	25
+ 3	36	16
21	16	41

2. Find the sum :

Ans. a.

hour	min	sec
	(1)	
	35	26
+	42	52
1	18	18

= 1 hour 18 min 18 sec.

b.

hours	min	sec
(1)	(1)	
12	54	4
+ 7	43	58
20	38	02

= 20 hours 38 min 2 sec.

c.

	years	months
	1	
	12	6
+	3	9
	16	3

= 16 years 3 months

3. Subtract :

Ans. a.

	min	sec
	62	70
	63	10
–	19	45
	43	25

b.

	hours	min
	49	60
	50	00
–	42	37
	7	23

c.

	hours	min	sec
		65	70
	16	66	10
–	8	42	29
	8	23	41

d.

	hours	min	sec
	72	114	80
	73	55	30
–	18	58	57
	54	56	23

4. Subtract :

Ans. a. **42 minutes 38 seconds from 50 minutes 17 seconds**

= 50 min. 17 sec. – 42 min. 38 sec.

= 7 min. 39 sec.

	min	sec
	49	77
	50	17
–	42	38
	7	39

b. **13 hours 28 minutes from 16 hours 12 minutes**

= 16 hours 12 min. – 13 hours 28 min.

	hour	min
	15	72
	16	12
–	13	28
	2	44

= 2 hours 44 min.

c. **15 years 9 months from 18 years 5 months.**

= 18 years 5 months – 15 years 9 months

	years	months
	17	17
	18	5
–	15	9
	2	8

= 2 years 8 months

5. Solve the following story sums :

Ans. a. Vinay studies for = 2 hour 15 min

Nishant studies for = – 1 hour 45 min

Vinay studies for longer period = **0 hour 30 min**

So, Vinay studies 30 min. longer than Nishant.

b. Express train takes = 6 7 hour 85 25 min
Super fast trains takes = – 5 hour 45 min
Time saved by faster train = **1 hour 40 min**
So, 1 hour 40 min saved, If we travel by faster train.

c. Vidhi studies in the morning = 1 2 hour 15 min
Vidhi studies in the evening = + 1 hour 50 min
Total time spent by Vidhi in studying = **4 hour 5 min**
So, Vidhi spend 4 hours 5 min. for studying in a day.

Higher order Thinking Skills (HOTS)

Ans. 28 Feb and 1 March

Exercise 10 (c)

1. Find the duration of time :

Ans. a. **4 : 25 p.m. to 1 : 10 a.m.**
4 : 25 p.m. = 1625 hours to 2400 hours
= 7 hours 35 min
Now, 735 hours + 110
hours = 845 hours
So, Duration = 8 hours 45 min

2360
2400
– 1625
0735
+ 110
845

b. **9 : 10 a.m. to 4 : 50 p.m.**
910 hours to 1650 hrs.
So, Duration = 740 hours
= 7 hours 40 min.

1650
– 910
740

c. **8 : 10 a.m. to 1 : 40 p.m.**
810 hours to 1340 hours
So, Duration = 530 hours
= 5 hours 30 min.

1340 **hours**
– 810 **hours**
530 **hours**

d. **8 : 45 p.m. to 12 : 00 noon**
8 : 45 p.m. to 12 : 00 midnight
2045 hour to 2400 hours
So, 8 : 45 p.m. to 12 : 00 noon
So, Duration = 3 : 15 + 12 : 00 hrs
15 : 15 hours = 15 hours
15 minutes.

2360
2400 **hours**
– 2045 **hours**
315 **hours**

2. Solve :

Ans. a. Application given on = 12 January
Leaves = 40 days
Days = 12 Jan to 31 Jan = (31 – 12 + 1) = 20 days
20 days in Feb.
So, he will join office on 21th Feb.

b. Hockey match finished = 1 : 10 p.m.
Duration of match = 90 min.

$$1:10\ \text{p.m.} \xrightarrow{1\ \text{hr}} 12:10\ \text{p.m.} \xrightarrow{30\ \text{min.}} 11:40\ \text{a.m.}$$

So, Match start at 11 : 40 a.m.

c. Vimal went on leave = March 13
He joined duty = On April 15
13 March to 31 March = (31 – 13) = 18 days
1 April to 15 April = 15 – 1 = 14 days
So, He was on leave for 18 + 14 = 32 days.

Exercise 10 (d)

1. Fill in the blanks :

Ans. a. Doctors use **fahrenheit** thermometer.
b. Liquid used in thermometer is called **mercury**.
c. The normal body temperature of a person is **37** °C or **98.6** °F.
d. Water boils at **100** °C and freezes at **32** °F.
e. When the temperature was 5°C, I had to wear **woolen clothes** to protect myself.

2. Convert the following into Fahrenheit scale :

Ans. a. **0°C**
$0° \times 9 = 0°$
$0° \div 5 = 0°$
$0° + 32° = 32°F$
So, 0°C = 32°F

b. **65°C**
$65° \times 9 = 585°$
$585° \div 5 = 117°$
$117° + 32° = 149°$
So, 65°C = 149°F

c. **37.5°C**
$37.5° \times 9 = 337.5°$
$337.5° \div 5 = 67.5°$
$67.5° + 32° = 99.5°$
So, 37.5°C = 99.5°F

d. **75°C**
$75° \times 9 = 675°$
$675° \div 5 = 135°$
$135° + 32° = 167°$
So, 75°C = 167°F

e. **95°C**
95° × 9 = 855°
855° ÷ 5 = 171°
171° + 32° = 203°
So, 95°C = 203°F

f. **35°C**
35° × 9 = 315°
315° ÷ 5 = 63°
63° + 32° = 95°
So, 35°C = 95°F

g. **90.5°C**
90.5° × 9 = 814.5°
814.5° ÷ 5 = 162.9°
162.9° + 32° = 194.9°
So, 90.5°C = 194.9°F

h. **50°C**
50° × 9 = 450°
450° ÷ 5 = 90°
90° + 32° = 122°
So, 50°C = 122°F

3. Convert the following into Celsius scale :

Ans. a. **86°F**
86° – 32° = 54°
54° × 5 = 270°
270° ÷ 9 = 30°
So, 86° F = 30° C

b. **203°F**
203° – 32° = 171°
171° × 5 = 855°
855° ÷ 9 = 95°
So, 203° F = 95° C

c. **131.9°F**
131.9° – 32° = 99.9°
99.9° × 5 = 499.5°
499.5° ÷ 9 = 55.5°
So, 131.9° F = 55.5°C

d. **122°F**
122° – 32° = 90°
90° × 5 = 450°
450° ÷ 9 = 50°
So, 122° F = 50°C

e. **104°F**
104° – 32° = 72°
72° × 5 = 360°
360° ÷ 9 = 40°
So, 104°F = 40°C

f. **194°F**
194° – 32° = 162°
162° × 5 = 810°
810° ÷ 9 = 90°
So, 194°F = 90°C

g. **108.5°F**
108.5° – 32° = 76.5°
76.5° × 5 = 382.5°
382.5° ÷ 9 = 42.5°
So, 108.5°F = 42.5°C

h. **95°F**
95° – 32° = 63°
63° × 5 = 315°
315° ÷ 9 = 35°
So, 95°F = 35°C

4. Find :

a. Temperature was recorded in the morning = 25°C
25° × 9 = 225° ⇒ 225° ÷ 5 = 45° ⇒ 45° + 32° = 77°
or ∵ 25°C = 77°F
Temperature increased = 10°F
So, temperature = (77° + 10°) F = 87°F

b. Yes, because 37°C is the normal temperature of the human body.

c. At 0°C or 32°F water turn into ice.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. b 3. c 4. a

NEP

Creative Thinking

1. Bird's body is 12°C warmer than a bat's body.
2. The body temperature of spring an eater in 5°C colder than a hedge had body temperature.
3. The normal body temperature of a human being is 37°C.
4. The body temperature of a Hedgehog is (35 × 9 ÷ 5 + 32°) °F = 95°F.

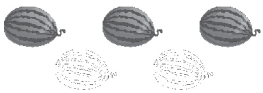
Chapter 11 Percentage

Let's Recall

Write the shaded part as percentage :

a. 

$\frac{5}{10} = 50\%$

b. 

$\frac{3}{5} = 60\%$

c. 

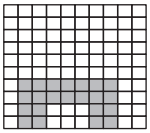
$\frac{15}{20} = 75\%$

d. 

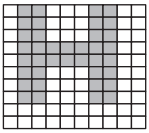
$\frac{4}{8} = 50\%$

Exercise 11 (a)

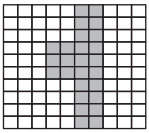
1. What percentage of the square is shaded?

Ans. a. 

$\frac{22}{100} = 22\ \%$

b. 

$\frac{38}{100} = 38\ \%$

c. 

$\frac{26}{100} = 26\ \%$

2. Write the following fractions as percentage :

Ans. a. $\frac{1}{2}$ $= \frac{1}{2} \times 100\% = 50\%$

b. $\frac{3}{5}$ $= \frac{3}{5} \times 100\% = 60\%$

c. $\frac{4}{10}$ $= \frac{4}{10} \times 100\% = 40\%$

d. $\frac{1}{4}$ $= \frac{1}{4} \times 100\% = 25\%$

3. Write the following percentage as fraction :

Ans. a. **35%** $= \frac{35}{100} = \frac{7}{20}$

b. **54%** $= \frac{54}{100} = \frac{27}{50}$

c. **60%** $= \frac{60}{100} = \frac{3}{5}$

d. **85%** $= \frac{85}{100} = \frac{17}{20}$

4. Write the following decimal fraction as percentage :

Ans. a. **0.32** $= \frac{32}{100} = 32\%$

b. **0.43** $= \frac{43}{100} = 43\%$

c. **0.058** $= \frac{58}{1000} = \frac{58}{10} \times \frac{1}{100}$

$= \frac{5.8}{100} = 5.8\%$

d. **0.85** $= \frac{85}{100} = 85\%$

5. Write percentage as decimal fraction :

Ans. a. **83%** $= \frac{83}{100} = 0.83$

b. **35%** $= \frac{35}{100} = 0.35$

c. **26%**

$= \frac{26}{100} = 0.26$

d. **62%**

$= \frac{62}{100} = 0.62$

Exercise 11 (b)

1. Find the value of the given numbers :

Ans. a. **10% of 62**

$= 62 \times \frac{10}{100} = 6.2$

b. **22% of 145**

$= 145 \times \frac{22}{100} = 31.90$

c. **68% of 96**

$= 96 \times \frac{68}{100} = \frac{6528}{100} = 65.28$

d. **34% of 138**

$= 138 \times \frac{34}{100} = \frac{138 \times 34}{100} = \frac{4692}{100} = 46.92$

e. **82% of 346**

$= 346 \times \frac{82}{100} = \frac{28372}{100} = 283.72$

f. **73% of 204**

$= 204 \times \frac{73}{100} = \frac{14892}{100} = 148.92$

2. Find :

Ans. a. **Let x% of 80 is 25**

Then $80 \times x\% = 25$

$\frac{80 \times x}{100} = 25$

or $x = \frac{25 \times 100}{80}$

$x = 31.25$

or $x = 31.25\ \%$

b. **Let x% of ₹300 is ₹30.**

Then $300 \times x\% = 30$

$\frac{300 \times x}{100} = 30$

or $x = \frac{30 \times 100}{300}$ $x = 10$

or $x = 10\ \%$

c. **Let x% of 1200 g is 264 g**

Then $1200 \times x\% = 264$

$\frac{1200 \times x}{100} = 264$

or $x = \frac{264 \times 100}{1200}$ $x = 22$

or $x = 22\ \%$

d. **Let x% of ₹2000 is ₹250**

Then $2000 \times x\ \% = 250$

$\frac{2000 \times x}{100} = 250$

or $x = \frac{250 \times 100}{2000}$ $x = 12.5$

or $x = 12.5\ \%$

3. Solve :

Ans. a. Total mark = 750

Kavya scored = 89 %

So, Marks of Kavya = 89% of 750

$= \frac{750 \times 89}{100} = 667.5$

So, Kavya got 667.5 marks out of 750.

b. Total students = 40

Present students = 35%

So. no. of present students = $40 \times 35\%$

$= \frac{40 \times 35}{100} = 14$ students

So, no. of absentes = 40 – 14 = 26 students.

c. Vidhya earns per month = ₹ 24000
She saves = 28 %
= 28 % of ₹24000
= ₹$\frac{24000 \times 28}{100}$ = ₹ 6720
So, she spent per month = ₹ 24000 – ₹ 6720
= ₹ 17280
So, she spent ₹ 17280 per month.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. d 3. c

NEP Collaboration

Ans. Do it yourself.

Chapter 12

Money

Let's Recall

Mr Joseph opened a savings account in a bank on 4th January, 2025.

He made the following transactions.

S.No.	Date	Money deposited/ withdrew	Total
1.	4th Jan, 2025	Deposited ₹ 4000.00	₹ 4000.00
2.	8th Feb, 2025	Deposited ₹ 1560.00	₹ 5560.00
3.	10th March, 2025	Withdrew ₹ 1376.00	₹ 4184.00
4.	16th June, 2025	Withdrew ₹ 1500.00	₹ 2684.00
5.	23rd December, 2024	Deposited ₹ 235.50	₹ 2919.50

Find the total amount at the end of the year = ₹ 2919.50.

Exercise 12 (a)

1. Find the profit or loss.

Ans.

S.No.	C.P.	S.P.	Profi	Loss
a.	₹ 5,000	₹ 6,000	₹ 1000	
b.	₹ 12,000	₹ 10,000		₹ 2000
c.	₹ 1,800	₹ 2,400	₹ 600	
d.	₹ 5,400	₹ 7,200	₹ 1800	
e.	₹ 9,100	₹ 8,000		₹ 1100

2. Fill in the blanks.

Ans.

S.No.	C.P.	S.P.	P	L
a.	₹ 2,900	₹ 2600		₹ 300
b.	₹ 2800	₹ 2,900	₹ 100	
c.	₹ 1650	₹ 1,590		₹ 60
d.	₹ 6,100	₹ 6400	₹ 300	
e.	₹ 5,400	₹ 5800	₹ 400	

3. Solve these story problems.

Ans.

a. C.P. of mobile = ₹ 2675
S.P. of mobile = ₹ 3629
Since SP > CP
So, he made a profit.
Profit = S.P. – C.P.
Profit = ₹ 3629 – ₹ 2675 = ₹ 954

b. C.P. of pen = ₹ 17.50
S.P. of pen = ₹ 22.00
Since SP > CP
So, he made a profit.
Profit = S.P. – C.P.
= ₹ 22.00 – ₹ 17.50 = ₹ 4.50

c. C.P. of fan = ₹ 725.00
Loss = ₹ 50.00
So, S.P. of fan = C.P. – Loss
= ₹ 725 – ₹ 50 = ₹ 675

d. S.P. of book = ₹ 360
Profit = ₹ 85
So, C.P. of book = SP – Profit
= ₹ 360 – ₹ 85 = ₹ 275

e. C.P. of radio = ₹ 740
Loss = ₹ 95
So, S.P. of radio = CP – loss
= ₹ 740 – ₹ 95 = ₹ 645

f. C.P. of cycle = ₹ 4695
Profit = ₹ 1125
So, S.P. of cycle = C.P. + Profit
= ₹ 4695 + ₹ 1125 = ₹ 5820

Exercise 12 (b)

1. Fill in the blanks :

Ans. a. P = ₹ 1800
R = 5 %
T = 2 years
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{1800 \times 5 \times 2}{100}$
= ₹ 180
A = P + S.I.
= ₹ 1800 + ₹ 180
= ₹ 1980

b. P = ₹ 560
R = 8 %
T = 10 years
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{560 \times 8 \times 10}{100}$
= ₹ 448
A = P + S.I.
= ₹ 560 + ₹ 448
= ₹ 1008

c. P = ₹ 2500
R = 10 %
T = 5 years
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{2500 \times 10 \times 5}{100}$
= ₹ 1250
A = P + S.I.
= ₹ 2500 + ₹ 1250
= ₹ 3750

d. P = ₹ 6500
R = 12 %
T = 3 years
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{6500 \times 12 \times 3}{100}$
= ₹ 2340
A = P + S.I.
= ₹ 6500 + ₹ 2340
= ₹ 8840

e. P = ₹ 15000
R = 11 %
T = 2 years
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{15000 \times 11 \times 2}{100}$ = ₹ 3300
A = P + S.I. = ₹ 15000 + ₹ 3300
= ₹ 18300

2. Find the interest and the amount for 1 year when the principal and the rate of interest are given to you :

Ans. a. P = ₹ 2000
R = 5 %
T = 1 year
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{2000 \times 5 \times 1}{100}$
= ₹ 100
A = P + S.I.
= ₹ 2000 + ₹ 100
= ₹ 2100

b. P = ₹ 1500
R = 7 %
T = 1 year
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{1500 \times 7 \times 1}{100}$
= ₹ 105
A = P + S.I.
= ₹ 1500 + ₹ 105
= ₹ 1605

c. P = ₹ 2800
R = 10 %
T = 1 year
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{2800 \times 10 \times 1}{100}$
= ₹ 280
A = P + S.I.
= ₹ 2800 + ₹ 280
= ₹ 3080

d. P = ₹ 10000
R = 3 %
T = 1 year
S.I. = $\frac{P \times R \times T}{100}$
= ₹ $\frac{10000 \times 3 \times 1}{100}$
= ₹ 300
A = P + S.I.
= ₹ 10000 + ₹ 300
= ₹ 10300

e. $P = ₹\ 14000$
$R = 8\ \%$
$T = 1\ \text{year}$
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{14000 \times 8 \times 1}{100}$
$= ₹\ 1120$
$A = P + S.I.$
$= ₹\ 14000 + ₹\ 1120$
$= ₹\ 15120$

f. $P = ₹\ 2500$
$R = 12\ \%$
$T = 1\ \text{year}$
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{2500 \times 12 \times 1}{100}$
$= ₹\ 300$
$A = P + S.I.$
$= ₹\ 2500 + ₹\ 300$
$= ₹\ 2800$

3. Find the interest and the amount when :

Ans. a. $P = ₹\ 1000$
$R = 2.5\ \%$
$T = 3\ \text{years}$
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{1000 \times 2.5 \times 3}{100}$
$= ₹\ 75$
$A = P + S.I.$
$= ₹\ 1000 + ₹\ 75$
$= ₹\ 1075$

b. $P = ₹\ 2500$
$R = 12\frac{1}{2}\ \% = \frac{25}{2}\ \%$
$T = 10\ \text{year}$
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{2500 \times 25 \times 10}{2 \times 100}$
$= ₹\ 3125$
$A = P + S.I.$
$= ₹\ 2500 + ₹\ 3125$
$= ₹\ 5625$

c. $P = ₹\ 750$
$R = 5\ \%$
$T = 2\frac{1}{2}\ \text{years} = \frac{5}{2}\ \text{years}$
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{750 \times 5 \times 5}{100 \times 2}$
$= ₹\ 93.75$

d. $P = ₹\ 10000$
$R = 6\frac{1}{2}\ \% = \frac{13}{2}\ \%$
$T = 4\ \text{years}$
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{10000 \times 13 \times 4}{100 \times 2}$
$= ₹\ 2600$

$A = P + S.I.$
$= ₹\ 750 + ₹\ 93.75$
$= ₹\ 843.75$

e. $P = ₹\ 15000$
$R = 5\ \%$
$T = 7\frac{1}{2}$ years $= \frac{15}{2}$ years
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{15000 \times 5 \times 15}{100 \times 2}$
$= ₹\ 5625$
$A = P + S.I.$
$= ₹\ 15000 + ₹\ 5625$
$= ₹\ 20625$

f. $P = ₹\ 5000$
$R = 10\ \%$
$T = 3\frac{1}{2}$ years $= \frac{7}{2}$ years
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{5000 \times 10 \times 7}{100 \times 2}$
$= ₹\ 1750$
$A = P + S.I.$
$= ₹\ 5000 + ₹\ 1750$
$= ₹\ 6750$

4. Solve these problems :

Ans. a. $P = ₹\ 12000$
$R = 6\frac{1}{2}\ \% = \frac{13}{2}\ \%$ per annum
$T = 5$ years
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{12000 \times 13 \times 5}{100 \times 2}$
$= ₹\ 3900$

b. $P = ₹\ 3500$
$R = 7\ \%$
$T = 3$ years
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{3500 \times 7 \times 3}{100}$
$= ₹\ 735$
So, Mauli will get ₹ 735 as interest after 3 years.

c. $P = ₹\ 70000$
$R = 11\ \%$ per annum
$T = 6$ years
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{70000 \times 11 \times 6}{100}$
$= ₹\ 46200$

d. $P = ₹\ 4500$
$R = 12\ \%$
$T = 5$ years
$S.I. = \frac{P \times R \times T}{100}$
$= ₹\ \frac{4500 \times 12 \times 5}{100}$
$= ₹\ 2700$

A = P + S.I.
= ₹ 4500 + ₹ 2700
= ₹ 7200

So, he will have to pay ₹ 46200 as interest.

So, he will repay ₹ 7200 at the end of 5 years.

NEP Critical Thinking

Compare the following. Tick (✓) the best deal.

Ans.

1.	20		for ₹ 275		25		for ₹ 300	✓
2.	3 kg		for ₹ 30		4 kg		for ₹ 38	✓
3.	12		for ₹ 60	✓	16		for ₹ 96	
4.	9		for ₹ 202.50		12		for ₹ 264	✓
5.	8		kg for ₹ 260	✓	5 kg		for ₹ 163.75	

Chapter

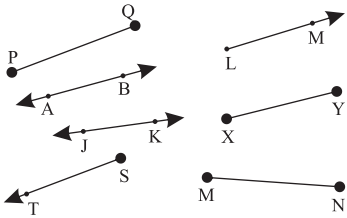
13 Basic Geometrical Concepts

Let's Recall

1. Identify the line, line segment and ray and write their name in the correct box.

Ans.

Line	Line segment	Ray
AB JK	PQ XY MN	LM ST



Worksheet

Fill in the blanks :

Ans. 1. A line has **no** end points.

2. A **line segment** can be measured.

3. A **Ray** has one end point.
4. **Intersecting** lines meet at a point.
5. The distance between two **paralled** lines remains same throughout.

Exercise 13 (a)

1. Using a pair of dividers, compare the lengths of the two line segments. Complete the sentence given below by choosing the appropriate term (longer/shorter)

Ans. a.

The line segment XY is **shorter** than the line segment MN.

b.

The line segment AB is **longer** than the line segment CD.

2. Using a scale, draw line segments of the following measurements :

Ans. Do it yourself.

3. Look at the given figure and fill in the blanks.

Ans. a. **AB** is parallel to CD.
b. **KL** is perpendicular to AB and CD.
c. AB and CD intersect **KL** and **XY**.
d. AB and XY are **intersecting** lines.

4. State true (T) or false (F) :

Ans. a. False b. False c. False d. True

Exercise 13 (b)

1. From the given figure, list the points which are :

Ans. a. X, Y b. A, B c. S, T

2. Measure the following angles using a protractor.

Ans. a. 90° b. 60° c. 110° d. 80°

3. Draw the following angles using a protractor. Name the angles correctly :

Ans. Do it yourself.

4. Fill in the blanks :

Ans. a. Angles are measured with the help of a **protractor**.
b. A straight angle always measures **180^{o}**.

c. A right angle measures 90^{o}.

d. An acute angle is greater than a zero angle but less than a right angle.

e. A 150° angle is an **obtuse** angle.

Exercise 13 (c)

1. A circle is given in the adjoining figure. Fill in the blanks by observing the figure.

Ans. a. Name the three radii = **OA, OB, OC**.

b. Name the diameter of the circle = **AOB**.

c. Name the chord of the circle = **XY**.

d. Name the minor arc of the circle = $\overset{\frown}{\mathbf{XY}}$.

e. Name the major segment of the circle = $\overset{\frown}{\mathbf{XACBY}}$.

f. Name the largest chord = **AOB**.

2. From the adjoining figure, write the points which are given :

Ans. a. In the interior of the circle **P, Q, O, T**.

b. In the exterior of the circle **N, R, M**.

c. On the circle **A, X, Y, Z**.

3. Find the radius of the circles with the following diameter :

Ans. a. $d = 7$ cm

$r = \frac{d}{2}$

$= \frac{7}{2}$ cm $= 3.5$ cm

b. $d = 8$ cm

$r = \frac{d}{2}$

$= \frac{8}{2}$ cm $= 4$ cm

c. $d = 7.2$ cm

$r = \frac{d}{2}$

$= \frac{7.2}{2}$ cm $= 3.6$ cm

d. $d = 4.8$ cm

$r = \frac{d}{2}$

$= \frac{4.8}{2}$ cm $= 2.4$ cm

4. Find the diameter of the circles with the following radii :

Ans. a. radius $= 6$ cm

$d = 2 \times r$

$= 2 \times 6$ cm

$=$ **12 cm**

b. radius $= 3.5$ cm

$d = 2 \times r$

$= 2 \times 3.5$ cm

$=$ **7.0 cm**

c. radius = 7.3 cm
d = 2 × r
= 2 × 7.3 cm
= **14.6 cm**

d. radius = 9.5 cm
d = 2 × r
= 2 × 9.5 cm
= **19.0 cm**

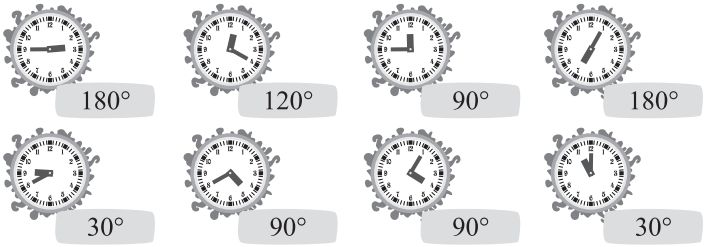
5. Draw circles with the following radii using a compass :

Ans. Do it yourself.

NEP Creative Thinking

A. Give the measure of the angle formed by the hands of the clock.

Ans.



Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. b 2. c 3. b 4. a

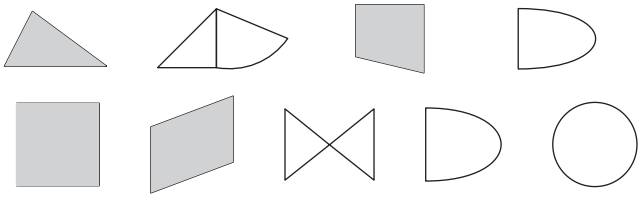
Chapter 14

Polygons and Circles

Let's Recall

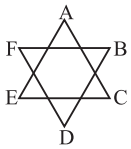
Colour the polygons in the following.

Ans.



Higher order Thinking Skills (HOTS)

In the given figure, find :



$\angle A + \angle B + \angle C + \angle D + \angle E + \angle F$

Ans. $= 180° + 180° = 360°$

Exercise 14 (a)

1. Fill in the blanks.

Ans. a. A triangle has **3** vertices, **3** angles.

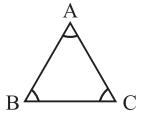
b. Each angle of an equilateral triangle measures **60°**.

c. If two sides of a triangle are equal to each other, then the triangle is called an **Isosceles** triangle.

d. A triangle is called acute angled triangle if all of its angles are **acute**.

e. A triangle is called right-angled if one of its angles is a **right (90°)** angle.

2. In ΔABC, Name.



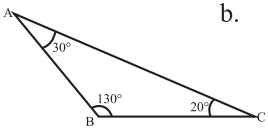
Ans. a. A, B and C are vertices of the triangle.

b. $\angle A$, $\angle B$ and $\angle C$ are angles of the triangle.

c. AB, BC and CA are sides of the triangle.

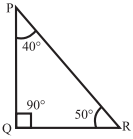
3. Classify the triangles according to their angles.

Ans. a.



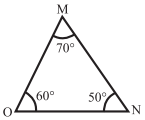
Obtuse-angled triangle

b.



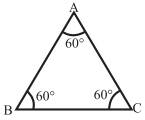
Right-angled triangle

c.



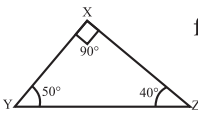
Acute-angled triangle

d.



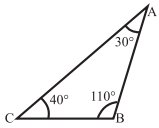
Acute-angled triangle

e.



Right-angled triangle

f.



Obtuse-angled triangle

4. Find the missing angle of each triangle.

Ans. a. We know that

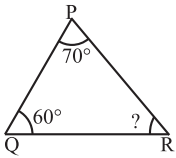
$\angle P + \angle Q + \angle R = 180°$

$70° + 60° + \angle R = 180°$

$130° + \angle R = 180°$

$\angle R = 180° - 130°$

$\angle R = 50°$



b. We know that

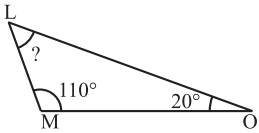
$\angle L + \angle M + \angle O = 180°$

$\angle L + 110° + 20° = 180°$

$\angle L + 130° = 180°$

$\angle L = 180° - 130°$

$\angle L = 50°$



c. We know that

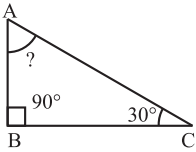
$\angle A + \angle B + \angle C = 180°$

$\angle A + 90° + 30° = 180°$

$\angle A + 120° = 180°$

$\angle A = 180° - 120°$

$\angle A = 60°$



Exercise 14 (b)

1. Fill in the blanks :

Ans. a. A rhombus has all its **sides** equal.

b. Opposite angles of a rhombus are **equal**.

c. Each angle of a rectangle is equal to **90°**.

d. A parallelogram whose all sides equal and each angle equal to 90° is called a **square**.

e. A trapezium having two sides equal is **Isosceles trapezium**.

2. In each of the following quadrilaterals, find the unknown angle.

Ans. a. We know that the sum of four angles of a quadrilateral ABCD is 360°

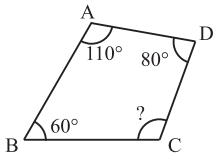
$\angle A + \angle B + \angle C + \angle D = 360°$

$110° + 60° + \angle C + 80° = 360°$

$250° + \angle C = 360°$

$\angle C = 360° - 250°$

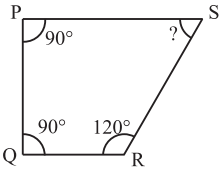
$\angle C = 110°$



b. We know that the sum of four angles of a quadrilateral PQRS is 360°

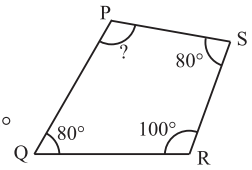
$\angle P + \angle Q + \angle R + \angle S = 360°$

$90° + 90° + 120° + \angle S = 360°$
$300° + \angle S = 360°$
$\angle S = 360° - 300°$
$\angle S = 60°$



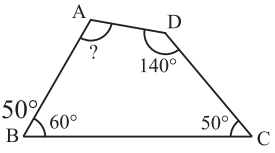
c. We know that the sum of four angles of a quadrilateral PQRS is 360°.

$\angle P + \angle Q + \angle R + \angle S = 360°$
$\angle P + 80° + 100° + 80° = 360°$
$\angle P + 260° = 360°$
$\angle P = 360° - 260°$
$\angle P = 100°$



d. We know that the sum of four angles of a quadrilateral ABCD is 360°

$\angle A + \angle B + \angle C + \angle D = 360°$
$\angle A + 140° + 60° + 50° = 360°$
$\angle A + 250° = 360°$
$\angle A = 360° - 250°$
$\angle A = 110°$



Multiple Choice Questions (MCQs)

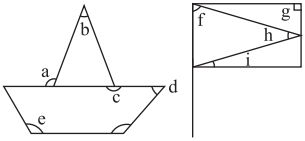
Choose the correct option.

Ans. 1. d 2. a 3. c 4. a

NEP Collaboration

Use a protractor to measure the angles from (a) to (i) these two figures, and then name what kind they are :

Ans. a. Obtuse b. Acute
c. Straight d. Acute
e. Obtuse f. Acute
g. Right h. Acute
i. Acute



Chapter

15 Perimeter, Area and Volume

Let's Recall

1. Find the perimeter of these posters.

Ans. a. 

140 cm

b. 

168 cm

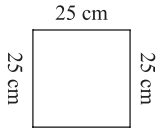
c. 

56 cm

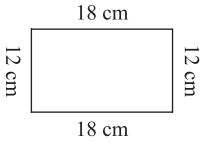
Exercise 15 (a)

1. Find the perimeter of these :

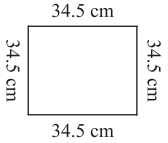
Ans. a. Perimeter = 25 cm + 25 cm + 25 cm + 25 cm
= 100 cm



b. Perimeter = 18 cm + 12 cm + 18 cm + 12 cm
= 60 cm



c. Perimeter = 34.5 cm + 34.5 cm + 34.5 cm + 34.5 cm
= 138 cm



2. Find the missing entry of the rectangle for each of the following :

Ans. a. Perimeter = 56 cm
length = 18 cm
breadth = ?
Perimeter = 2 (l + b)
56 cm = 2 (18 + b)
$\frac{56 \text{ cm}}{2}$ = 18 + b
b + 18 cm = 28 cm

b. Perimeter = 192 cm
length = ?
breadth = 46 cm
Perimeter = 2 (l + b)
192 cm = 2 (l + 46)
l + 46 cm = $\frac{192 \text{ cm}}{2}$
l + 46 cm = 96 cm

breadth = (28 – 18) cm
breadth = **10 cm**

c. Perimeter = 120 cm
length = ?
breadth = 20 cm
Perimeter = 2 (l +b)
120 cm = 2 (l + 20)
$\frac{120}{2}$ cm = l + 20 cm
l + 20 cm = 60 cm
length = (60 – 20) cm
length = 40 cm

e. Perimeter = 144 m
length = 48 m
breadth = ?
Perimeter = 2 (l +b)
144 m = 2 (48 + b)
48 m + b = $\frac{144}{2}$ m
48 m + b = 72 m
breadth = (72 – 48) m
breadth = 24 m

d. length = (96 – 46) cm
breadth = 50 cm

d. Perimeter = 64 m
length = 20 m
breadth = ?
Perimeter = 2 (l +b)
64 cm = 2 (20 + b)
20 m + b = $\frac{64}{2}$ m
20 m + b = 32 m
breadth = (32 – 20) m
breadth = 12 m

3. Find the side of the square for each of the following :

Ans. a. Perimeter = 15 cm
Side = ?
Side = $\frac{\text{Perimeter}}{4}$
= $\frac{15}{4}$ cm
= **3.75 cm**

b. Perimeter = 40 cm
Side = ?
Side = $\frac{\text{Perimeter}}{4}$
= $\frac{40}{4}$ cm
= **10 cm**

c. Perimeter = 27 cm
Side = ?
Side = $\frac{\text{Perimeter}}{4}$
= $\frac{27}{4}$ cm
= **6.75 cm**

d. Perimeter = 14 m
Side = ?
Side = $\frac{\text{Perimeter}}{4}$
= $\frac{14}{4}$ m
= **3.5 m**

e. Perimeter = 120 m
Side = ?
Side = $\frac{\text{Perimeter}}{4} = \frac{120}{4} =$ **30 m**

4. Solve these word problems :

Ans. a. length = 36.8 m
breadth = 12.9 m
perimeter of rectangle = 2 (l + b) m = 2 (36.8 + 12.9) m
= 2 (49.7) m = **99.4 m**

b. Side = 29.5 dm
Perimeter of square = 4 × side
= 4 × 29.5 dm = 118 dm

c. Sides of triangle are = 6 cm, 6 cm and 4 cm
So, perimeter of triangle = Sum of all sides
= 6 cm + 6 cm + 4 cm =16 cm

Exercise 15 (b)

1. Complete the following table.

Ans. a. length = 6 cm
breadth = 4 cm
∴ Area = l × b
= 6 cm × 4 cm
= **24 cm²**

b. length = 16 m
breadth = ?
Area = 128 m²
∵ Area = l × b
∴ breadth = $\frac{A}{b}$
= $\frac{128\ m^2}{16\ m}$ = 8 m

c. length = 14 cm
breadth = 7 cm
∴ Area = l × b
= 14 cm × 7 cm
= 98 cm²

d. length = 24 m
breadth = ?
Area = 240m²
∵ Area = l × b
∴ 240 = 24 × b
breadth = $\frac{240}{24}$ = 10 m

e. length = 11 m
breadth = 9 m
∴ Area = l × b
= 11 m × 9 m

f. length = ?
Area = 270m²
breadth = 15 m
∵ Area = l × b
∴ 270 = l × 15

$= 99m^2$

length $= \frac{270}{15} = 18$ m

2. Complete the following table.

Ans. a. Side = 6 cm
Area = $(Side)^2$
= 6 cm × 6 cm
= **36 cm^2**

b. Side = 9 cm
Area = $(Side)^2$
= $(9 cm)^2$
= 9 cm × 9 cm
= **81 cm^2**

c. Side = 12 cm
Area = $(Side)^2$
= $(12 cm)^2$
= 12 cm × 12 cm
= **144 cm^2**

d. Side = 16 m
Area = $(Side)^2$
= $(16 m)^2$
= 16 m × 16 m
= **256 m^2**

e. Side = 18 m
Area = $(Side)^2$
= $(18m)^2$
= 18 m × 18 m
= **324 m^2**

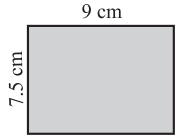
f. Side = 25 km
Area = $(Side)^2$
= $(25 km)^2$
= 25 km × 25 km
= **625 km^2**

3. Find the area of the following.

Ans. a.

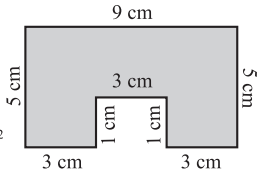
Area = $(Side)^2$
= Side × Side
= 5 cm × 5 cm
= **25 cm^2**

b.



length = 9 cm
breadth = 7.5 cm
Area = l × b
= 9 cm × 7.5 cm
= **67.5 cm^2**

c. Length of big rectangle = 9 cm
Breath of big rectangle = 5 cm
Area of big rectangle = l × b
= 9 × 5
= 45 cm^2



Length of small rectangle = 3 cm
Breadth of small rectangle = 1 cm

Area of small rectangle = $l \times b = 3 \times 1 = 3\ cm^2$

So, Area of figure = $(45 - 3)\ cm^2$ = **$42\ cm^2$**

4. Solve the following :

Ans. a. length = 600 cm = 6 m

breadth = 550 cm = 5.5 m

Area = $l \times b = 6 \times 5.5 = 33 m^2$

b. No. of tiles required = $\frac{\text{Area of room}}{\text{Area of tile}}$

$= \frac{24\ m \times 18\ m}{80\ cm \times 80\ cm}$

$= \frac{2400\ cm \times 1800\ cm}{80\ cm \times 80\ cm}$

$= 30 \times 22.5 = 675$

So, 675 tiles are required.

c. length = 80 m

breadth = 20 m

Area = $l \times b = 80 \times 20 = 1600\ m^2$

So, the Cost of ploughing the field = ₹4.50 × 1600 = ₹7200

d. Length of wall = 50 m

Width of wall = 9 m

Area of wall = $l \times b$

$= 9\ m \times 50\ m = 450\ m^2$

So, the Cost of painting = ₹12 × 450 = ₹5400

Exercise 15 (c)

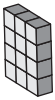
1. Count the cubes and find the volume in cm^3.

Ans. a.  $4\ cm^3$

b.  $6\ cm^3$

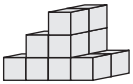
c.  $7\ cm^3$

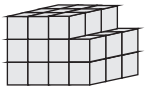
d.  $9\ cm^3$

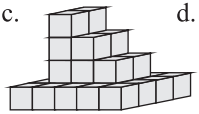
e.  $12\ cm^3$

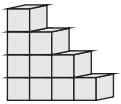
f.  $32\ cm^3$

2. Count the number of cubes and find the volume in cu. cm.

Ans. a.  14 cm^3

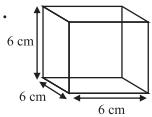
b.  33 cm^3

c.  32 cm^3

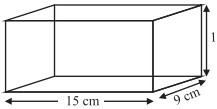
d.  10 cm^3

Fun with Maths

Find the volume of the following :

Ans. 1. 

Volume = **216** cu.cm.

2. 

Volume = **1620** cu.cm.

Exercise 15 (d)

1. Find the volume of these objects.

Ans.

a. length = 10 cm
breadth = 2 cm
height = 5 cm
∴ Volume = l × b × h
= 10 × 2 × 5
= **100 cm^3**

b. length = 10 cm
breadth = 6 cm
height = 2 cm
∴ Volume = l × b × h
= 10 × 6 × 2
= **120 cm^3**

c. length = 12 cm
breadth = 8 cm
height = 3 cm
∴ Volume = l × b × h
= 12 × 8 × 3
= **288 cm^3**

d. length = 10 cm
breadth = 5 cm
height = 2 cm
∴ Volume = l × b × h
= 10 × 5 × 2
= **100 cm^3**

e. length = 15 cm
breadth = 12 cm
height = 10 cm
∴ Volume = l × b × h
= 15 × 12 × 10 cm^3
= **1800 cm^3**

f. length = 6 cm
breadth = 5 cm
height = 4 cm
∴ Volume = l × b × h
= 6×5×4 cm^3
= **120 cm^3**

2. Find the volume of each of the following.

Ans.

a. length = 52 cm
breadth = 29 cm
height = 14 cm
∴ Volume = l × b × h

b. length = 12.4 m
breadth = 9 m
height = 7 m
∴ Volume = l × b × h

= 52 × 29 × 14
= **21,112 cm^3**

c. length = 9.6 m
breadth = 8 m
height = 6 m
∴ Volume = l × b × h
= 9.6 × 8 × 6
= **460.8 m^3**

d. length = 12.5 cm
breadth = 10 cm
height = 8 cm
∴ Volume = l × b × h
= 12.5×10×8
= 1000 cm^3

e. length = 129 mm
breadth = 57 mm
height = 16 mm
∴ Volume = l × b × h
= 129 × 57 × 16
= **117648 mm^3**

3. Solve these story problems.

Ans. a. Side = 5 cm
Volume = (side)^3
= 5 cm × 5 cm × 5 cm = 125 cm^3
∴ Volume of 20 ice cubes = 20 × 125 cm^3 = 2500 cm^3

b. length = 45 cm breadth = 20 cm height = 50 cm
∴ Volume of water = Volume of aquarium
= l × b × h
= 45 × 20 × 50 = 45000 cm^3

c. length = 22 cm breadth = 10 cm height = 8 cm
Volume of an ice cream brick = l × b × h
= 22 × 10 × 8 = 1760 cm^3

NEP

Communication

Ans. Do it yourself.

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a **2.** a **3.** c **4.** c **5.** c

Chapter

16 Symmetry and Patterns

Let's Recall

1. Colour to form a pattern :

Ans. Do it yourself.

Exercise 16 (a)

1. Tell whether the dotted line on each shape represents a line of symmetry. Write 'Yes' or 'No'.

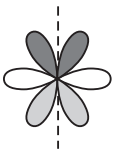
Ans. a.  No

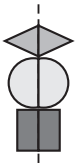
b.  Yes

c.  Yes

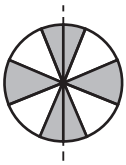
2. Complete the figures treating the dotted line as the line of symmetry.

Ans. a. 

b. 

c. 

d. 

e. 

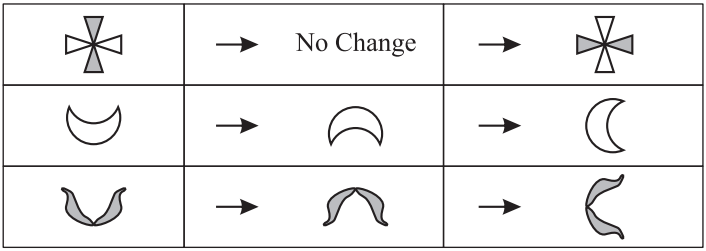
f. 

Exercise 16 (b)

1. Give each shape a quarter turn to complete the pattern.

Ans.

SHAPE	$\frac{1}{2}$ Turn	$\frac{1}{4}$ Turn
	→ No Change	→ 



Exercise 16 (c)

1. Identify the pattern and fill in the blank.

Ans. a.
$37 \times 3 = 111$
$37 \times 6 = 222$
$37 \times 9 = 333$
$37 \times 12 = \mathbf{444}$
$37 \times 15 = \mathbf{555}$

b.
$(9 - 1) \div 8 = 1$
$(98 - 2) \div 8 = 12$
$(987 - 3) \div 8 = 123$
$(9876 - 4) \div 8 = \mathbf{1234}$
$(98765 - 5) \div 8 = \mathbf{12345}$

c.
$1 \times 9 - 1 = 8$
$21 \times 9 - 1 = 188$
$321 \times 9 - 1 = 2888$
$4321 \times 9 - 1 = \mathbf{38888}$
$54321 \times 9 - 1 = \mathbf{488888}$

d.
$12 \times 2 + 3 = 27$
$12 \times 3 + 3 = 39$
$12 \times 4 + 3 = 51$
$12 \times 5 + 3 = \mathbf{63}$
$12 \times 6 + 3 = \mathbf{75}$

Multiple Choice Questions (MCQs)

Choose the correct option.

Ans. 1. a 2. b 3. c

NEP

Critical Thinking

Complete the Pattern.

Ans. 1.
$37 \times 3 = 111$
$37 \times 6 = 222$
$37 \times 9 = 333$
$37 \times \mathbf{12} = 444$
$37 \times 15 = \mathbf{555}$

2.
$1 + 3 = 4 = 2 \times 2$
$1 + 3 + 5 = 9 = 3 \times 3$
$1 + 3 + 5 + 7 = 16 = \mathbf{4 \times 4}$
$1 + 3 + 5 + 7 + 9 + 11 = \mathbf{36}$
$= \mathbf{6 \times 6}$

Chapter

17 Data Handling

Let's Recall

Use the pictures below to build a table using tally marks to find the number of footballs, caps, balloons and ice-creams.

Ans.

Object	Tally marks	Number
Football	𝍸 |	6
Cap	||||	4
Balloon	𝍸	5
Ice-cream	𝍸 ||	7

Exercise 17 (a)

1. The following is the data of different fast food liked by 30 students of class V. P. stands for Pizza, B for Burger, M for Momos, S for Sandwich and C for Chowmein.

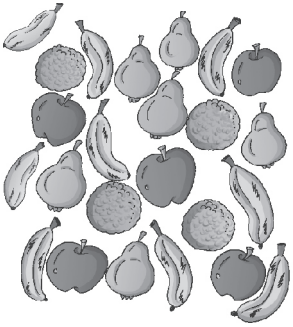
Ans.

S.No.	Fast Food	Students
1.	Pizza	7
2.	Berger	5
3.	Momos	9
4.	Sandwich	7
5.	Chowmein	2
	Total	30

a. Chowmein, by only 2 students.
b. Momos, by 9 students.
c. Pizza and Sandwich.
d. 5 students.

2. Arrange the following fruits in the tabular form.

Ans.



Fruit	Number of Fruits
Apple	𝍸
Orange	𝍸
Banana	𝍸 𝍸
Guava	𝍸 𝍸

3. Draw a pictograph to represent the following data.

Ans. Scale :

☺ = 10 students

◖ = 5 students

S.No.	Mode of transport	No. of students
1.	Bus	☺☺☺☺☺☺☺☺☺◖
2.	Cycle	☺☺☺☺☺☺☺☺◖
3.	Auto	☺☺☺☺☺☺☺◖
4.	Van	☺☺☺☺☺☺☺☺
5.	Walk	☺☺☺☺☺☺☺◖

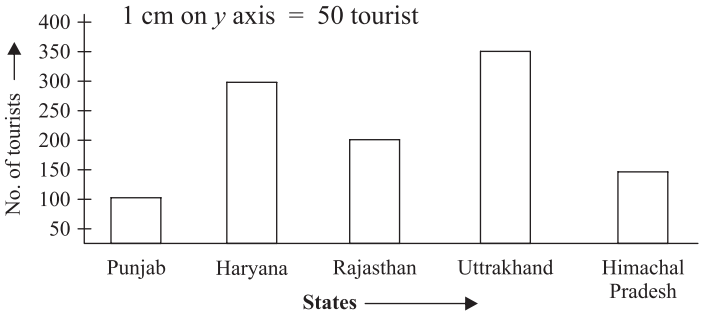
Exercise 17 (b)

1. The following graph represents the number of people of different countries in a world summit.

Ans. (a) 500 Indians (b) America (c) India
(d) China and Japan (e) 1350 people

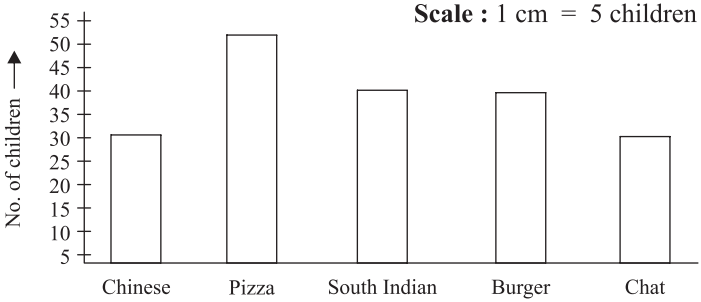
2. Number of tourists visited the states during a particular month are shown in the table given below.

Ans. Scale :



3. The following data shows the number of children who like following types of fast food.

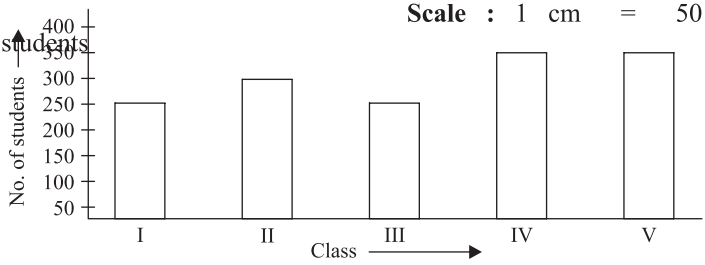
Ans. **Scale :** 1 cm = 5 children



a. Pizza b. Chat

4. The following data is about the number of students in class I to V in a school :

Ans. **Scale :** 1 cm = 50 students



Exercise 17 (c)

1. The students of class V voted for their favourite cartoon character. The data has been represented as a pie-chart given below. Study the pie chart and answer the following questions.

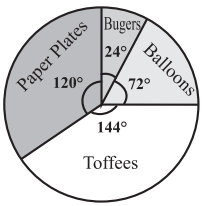
Ans. a. Doraemon b. Oggy c. Chota Bheem

d. Oogy < Shinchan < Chota Bheem < Doraemon

2. Draw pie charts for the following data.

Ans. a.

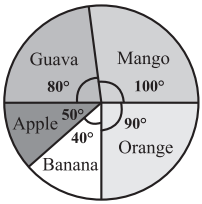
Items	Quantity purchased	Angle Covered
Balloons	60	$\frac{60}{300} \times 360° = 72°$
Toffees	120	$\frac{120}{300} \times 360° = 144°$
Paper plates	100	$\frac{100}{300} \times 360° = 120°$
Burgers	20	$\frac{20}{300} \times 360° = 24°$
Total	**300**	



b.

Types of tree	Number of trees	Angle Covered
Mango	10	$\frac{10}{36} \times 360° = 100°$
Guava	8	$\frac{8}{36} \times 360° = 80°$
Apple	5	$\frac{5}{36} \times 360° = 50°$
Orange	9	$\frac{9}{36} \times 360° = 90°$

Banana	4	$\frac{4}{36} \times 360° = 40°$
Total	**36**	



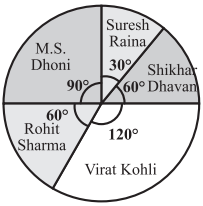
NEP Life Skill and Values

Study the pie chart and answer the following questions.

Ans. 1. Virat Kohli is like most.

2. Suresh Raina is like least.

3. There are 60 students in the class.



Note

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