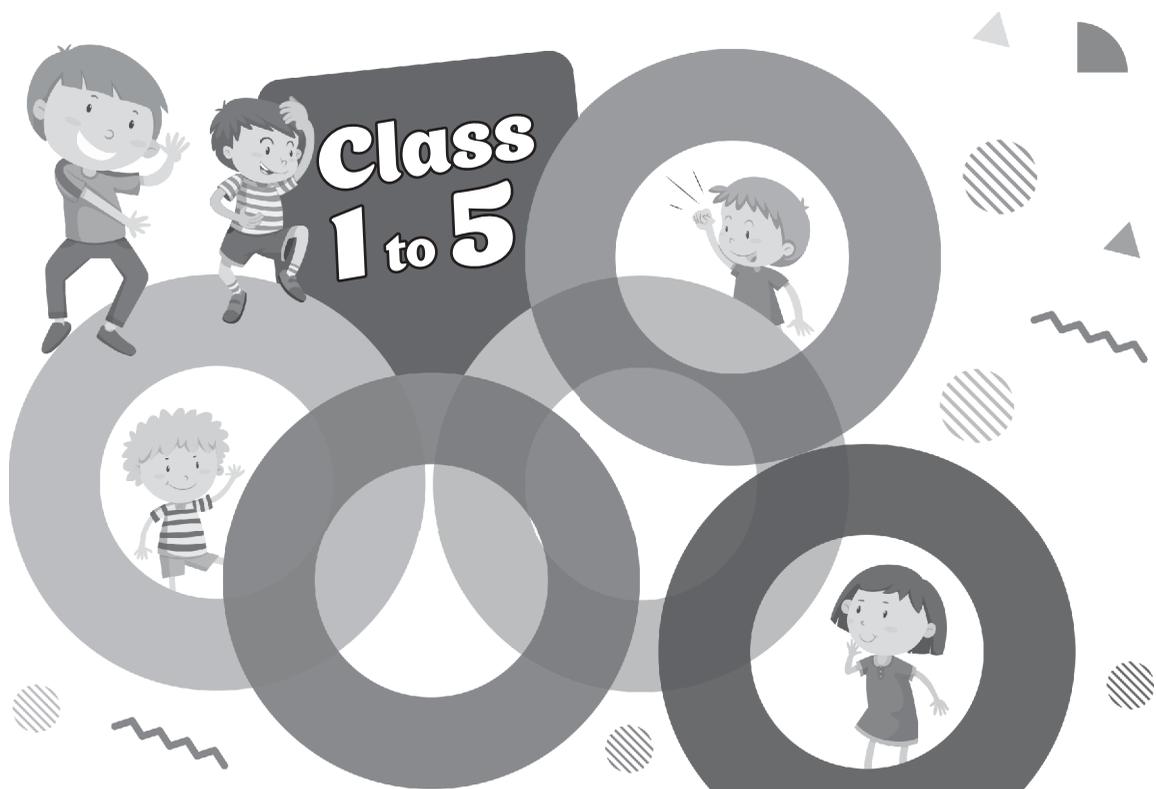


Teachers' Manual

MATHEMATICS





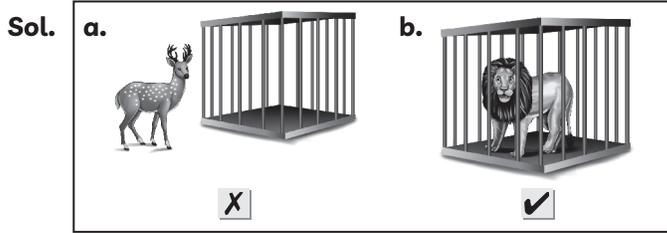
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1. Spatial Relationship

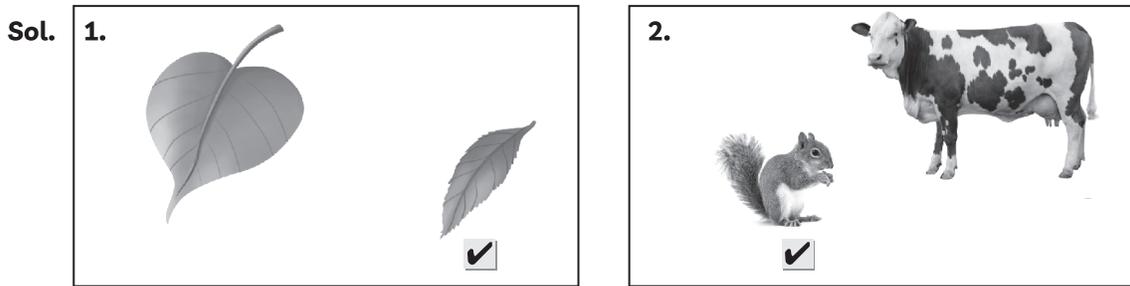
Concept Recap 1.1

Q.1 Tick (✓) the pictures where objects are inside and cross (X) the pictures where objects are outside.



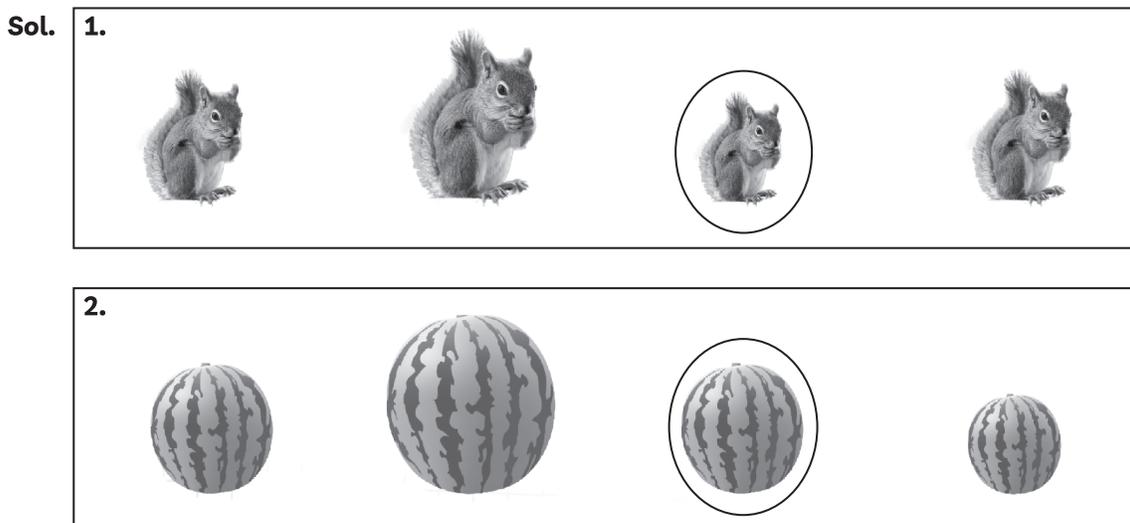
Concept Recap 1.2

Q. Tick (✓) the smaller:



Concept Recap 1.3

Q. By comparing with the objects on the left, encircle the objects that are of the same size:



Concept Recap 1.4

Q. Look at the pictures given alongside and fill in the blanks with the correct word (on/under):

Sol.

- (1) Mother is on the roof.
(2) Girl is under the roof.



Concept Recap 1.5

Q. Tick (✓) the correct object:

Sol.

1. Which is above the Sun?



2. Which is below the lizard?



3. Which is above the mango?



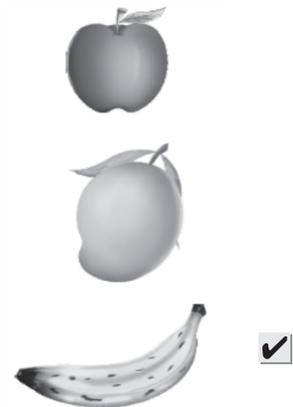
4. Which is below the sun?



5. Which is above the lizard?



6. Which is below the mango?



Concept Recap 1.6

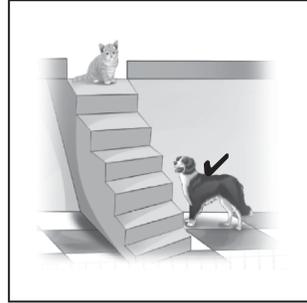
Q.1. Tick (✓) the pot on the top:

Sol.



Q.2. Tick (✓) the animal at the bottom of the stairs:

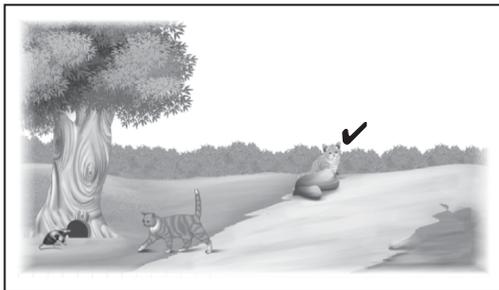
Sol.



Concept Recap 1.7

Q. Tick (✓) the cat far from the tree:

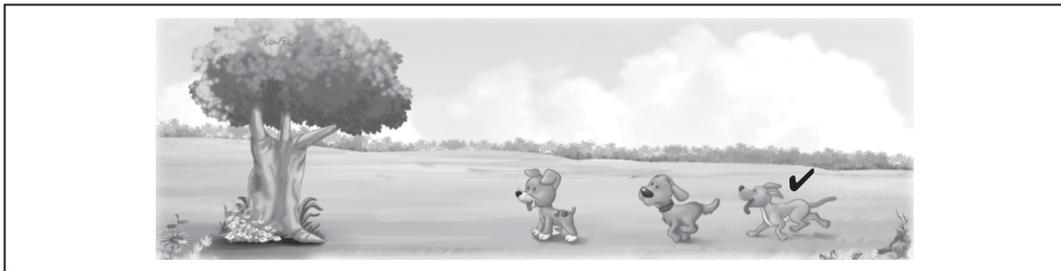
Sol.



Concept Recap 1.8

Q.1. Tick (✓) the puppy farthest from the tree:

Sol.



Q.2. Tick (✓) the tree nearest to the bird:

Sol.



Concept Recap 1.9

Q.1. Encircle the animal that is before the horse:

Sol.



Q.2. Encircle the flower that is after the rose:

Sol.



Q.3. Encircle the object that is before the umbrella:

Sol.



2. Counting Numbers One to Ten

Concept Recap 2.1

Q.1 Count the number of object in each picture and write in the placeholder.

Sol.

a.  1	b.  10	c.  3	d.  6	e.  4
---	--	---	--	---

f.



9

Q.2. Count the objects and match with the correct number:

Sol.

Q.3. Write the numbers for the following:

Sol.

(a) Three	→	3	(b) Two	→	2	(c) Nine	→	9
(d) Five	→	5	(e) Eight	→	8	(f) Six	→	6
(g) Seven	→	7	(h) One	→	1	(i) Four	→	4
(j) Ten	→	10						

Q.4. Write the number names for the following:

Sol.

(a) 9	→	Nine	(b) 1	→	One	(c) 8	→	Eight
(d) 4	→	Four	(e) 7	→	Seven	(f) 5	→	Five

Concept Recap 2.2

Q.1. Write the number that comes in between:

Sol.

(a) 6	7	8	(b) 3	4	5
(c) 5	6	7	(d) 7	8	9
(e) 1	2	3	(f) 4	5	6

Q.2. Write the number that comes after:

Sol.

(a) 3	4
(b) 8	9
(c) 5	6

Q.3. Write the number that comes before:

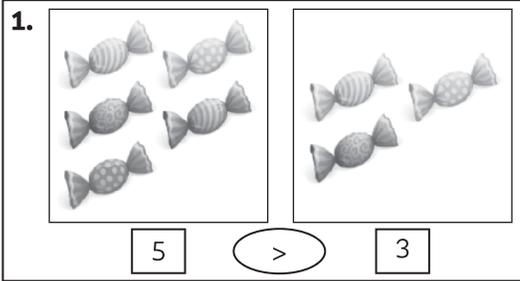
Sol.

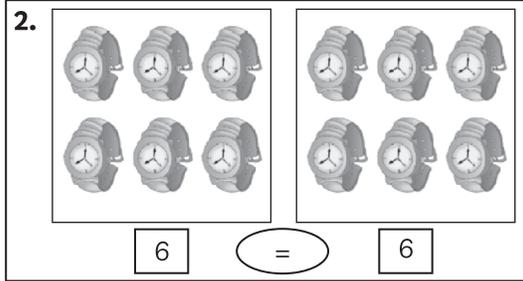
(a) 1	2
(b) 3	4
(c) 8	9

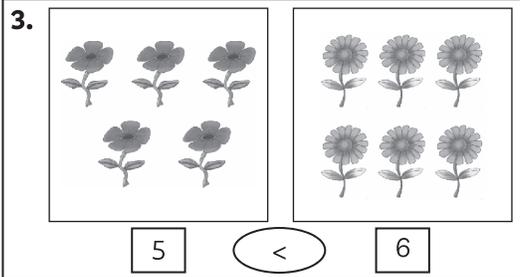
Concept Recap 2.3

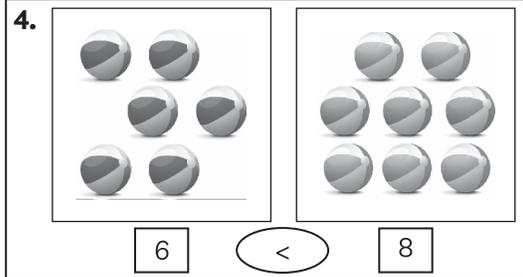
Q. Count and write. Also, put the correct sign $>$, $<$ or $=$:

Sol.

1.  $5 > 3$

2.  $6 = 6$

3.  $5 < 6$

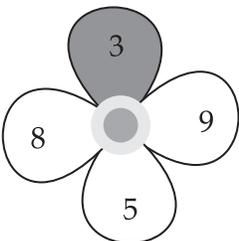
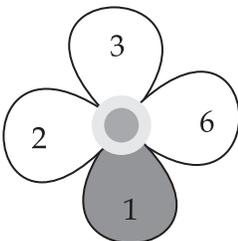
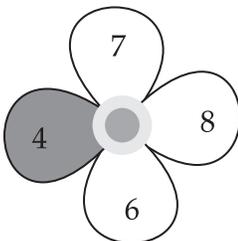
4.  $6 < 8$

Concept Recap 2.4

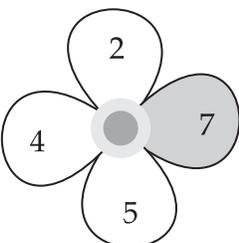
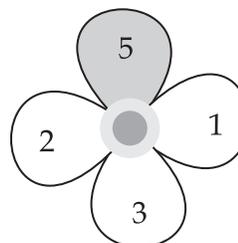
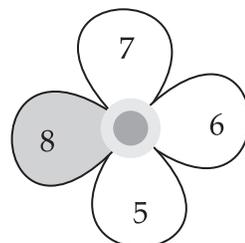
Q.1. Put the correct symbol $>$, $<$ or $=$ in the placeholder:

Sol. (a) $6 > 5$ (b) $7 < 9$ (c) $2 < 6$
 (d) $7 > 6$ (e) $8 > 4$ (f) $5 < 7$

Q.2. Colour the petal with the smallest number in red:

Sol. (a)  (b)  (c) 

Q.3. Colour the petal with the biggest number in green:

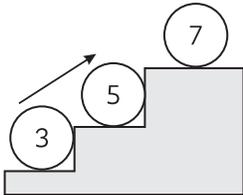
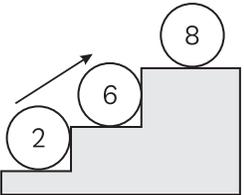
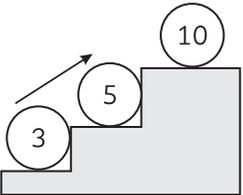
Sol. (a)  (b)  (c) 

Concept Recap 2.5

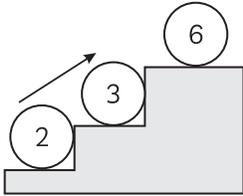
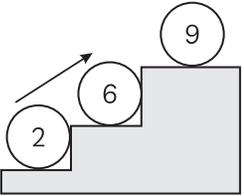
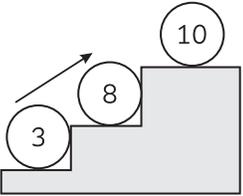
Q.1. Write these numbers from the smallest to the biggest:

Sol.

(a)   (c) 

(d)  (e)  (f) 

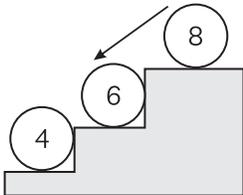
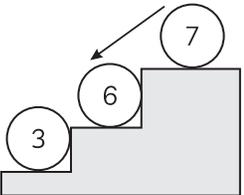
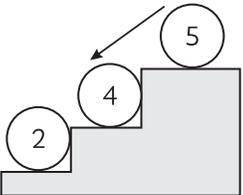
  

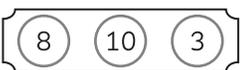
Concept Recap 2.6

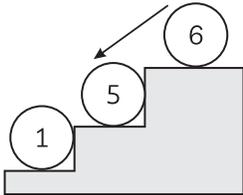
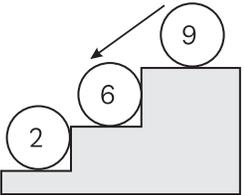
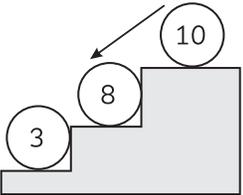
Q.1. Write these numbers starting from the biggest on the top to the smallest at the bottom:

Sol.

(a)  (b)  (c) 

(d)  (e)  (f) 

Q.2. Write these numbers starting from the biggest to the smallest:

Sol.

(a)

9	6	5	7	10	10	9	7	6	5
---	---	---	---	----	----	---	---	---	---

(a)

3	2	8	4	6	8	6	4	3	2
---	---	---	---	---	---	---	---	---	---

(a)

7	5	2	10	9	10	9	7	5	2
---	---	---	----	---	----	---	---	---	---

Concept Recap

Do yourself

3. Addition and Subtraction up to 10

Concept Recap 3.1

Q. Count the number of objects and write their sum in the placeholder:

Sol.

1.  and  make 

2.  and  make 

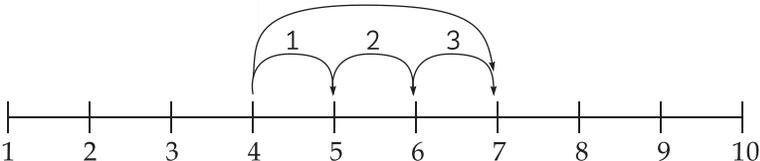
3.  +  and make
 + =

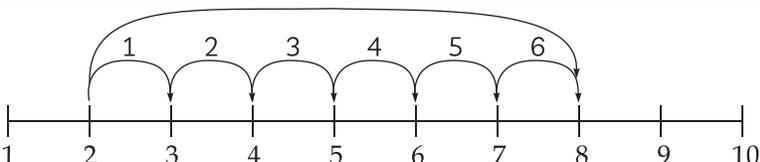
4.  +  and make
 + =

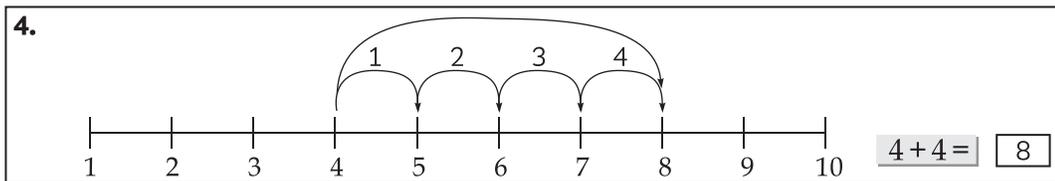
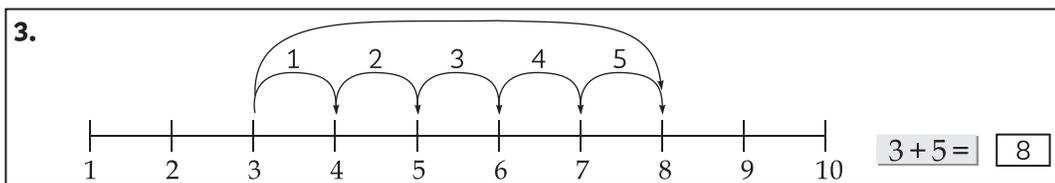
Concept Recap 3.2

Q. Show the steps on the number line and write the answer in the box:

Sol.

1. 

2. 



Concept Recap 3.3

Q. Add the following:

1. $1 + 0 = \underline{1}$

2. $3 + 0 = \underline{3}$

3. $5 + 0 = \underline{5}$

4. $7 + 0 = \underline{7}$

5. $0 + 2 = \underline{2}$

6. $0 + 8 = \underline{8}$

Concept Recap 3.4

Q. Add the following:

1. $7 + 1 = \underline{8}$

2. $5 + 1 = \underline{6}$

3. $1 + 6 = \underline{7}$

4. $1 + 9 = \underline{10}$

5. $4 + 5 = 5 + \underline{4}$

6. $3 + 6 = 6 + \underline{3}$

7. $5 + \underline{3} = 3 + 5$

Concept Recap 3.5

Q. Add by drawing lines:

Sol. 1.

3	
+ 6	
9	

2.

4	
+ 2	
6	

3.

5	
+ 4	
9	

4.

6	
+ 4	
10	

5.

7	
+ 3	
10	

6.

5	
+ 5	
10	

Concept Recap 3.6

Q.1. Add and write the Sum:

Sol. (a)

	+		+		=	8
3		2		3		

(b)

	+		+		=	6
2		1		3		

Q.2. Add:

Sol. (a) $2 + 1 + 5 = \underline{8}$

(b) $4 + 2 + 2 = \underline{8}$

Q.3. Add:

Sol. (a)

1		
4		
+ 3		
<td>8</td>		8

(b)

2		
1		
+ 6		
<td>9</td>		9

(c)

4		
2		
+ 4		
<td>10</td>		10

(d)

5		
3		
+ 1		
<td>9</td>		9

Story Sums on Addition

Q.1 Read the story and find the sum. Picture will help you:

Sol. 1.

3
+ 2
5

 5 children are dancing.

2.

5
+ 3
8

 There are 8 birds.

Q.3. I had 3 balloons. Ruby give me 3 more:

Sol. I got 6 balloons in all.

$3 + 3 = \underline{6}$



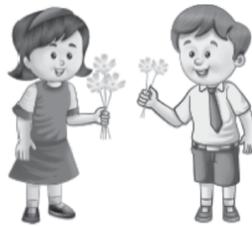
Concept Recap 3.7

Q.1.

Sol.



5 flower



2 gave to Sohail



3 are left.

Q.2.

Sol.



3 butterflies



2 flew away



1 are left.

Q.3.

Sol.



cows



run away



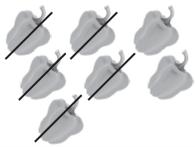
are left.

Concept Recap 3.8

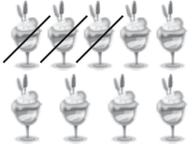
Q. Cross out to subtract and find the answer:

Sol.

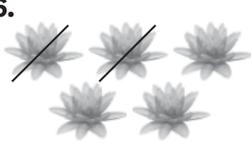
1. 
 $9 - 3 = \text{$

2. 
 $7 - 5 = \text{$

3. 
 $5 - 2 = \text{$

4. 
 $9 - 3 = \text{$

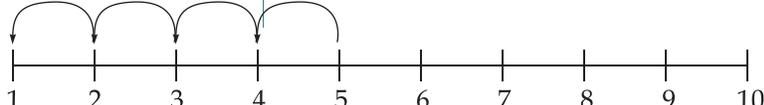
5. 
 $7 - 5 = \text{$

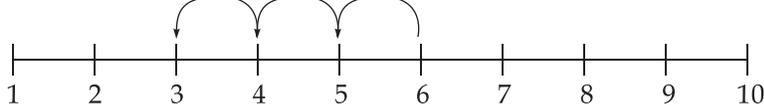
6. 
 $5 - 2 = \text{$

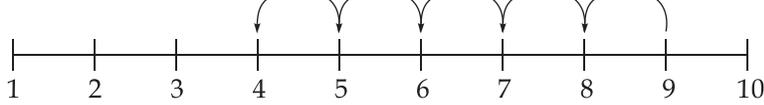
Concept Recap 3.9

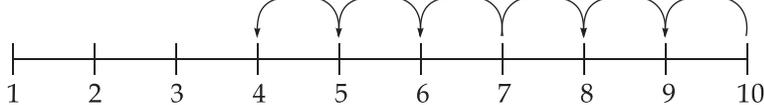
Q. Subtract the numbers on the number line:

Sol.

1. 
 $5 - 4 = \text{$

2. 
 $6 - 3 = \text{$

3. 
 $9 - 5 = \text{$

4. 
 $10 - 6 = \text{$

Concept Recap 3.10

Q. Subtract by crossing out:

Sol. 1.
$$\begin{array}{r} 9 \text{ |||||} \\ - 6 \\ \hline \boxed{3} \end{array}$$
 2.
$$\begin{array}{r} 7 \text{ |||||} \\ - 2 \\ \hline \boxed{5} \end{array}$$
 3.
$$\begin{array}{r} 8 \text{ |||||} \\ - 4 \\ \hline \boxed{4} \end{array}$$
 4.
$$\begin{array}{r} 6 \text{ ||||} \\ - 5 \\ \hline \boxed{1} \end{array}$$

5.
$$\begin{array}{r} 5 \text{ ||||} \\ - 1 \\ \hline \boxed{4} \end{array}$$
 6.
$$\begin{array}{r} 6 \text{ |||||} \\ - 0 \\ \hline \boxed{6} \end{array}$$
 7.
$$\begin{array}{r} 7 \text{ |||||} \\ - 6 \\ \hline \boxed{1} \end{array}$$
 8.
$$\begin{array}{r} 5 \text{ ||||} \\ - 3 \\ \hline \boxed{2} \end{array}$$

Story Sums on Subtraction

Q. Read the story and find the difference. Pictures will help you:

Sol. 1.
$$\begin{array}{r} 9 \\ - 4 \\ \hline \boxed{5} \end{array}$$
 2.
$$\begin{array}{r} 6 \\ - 2 \\ \hline \boxed{4} \end{array}$$
 3.
$$\begin{array}{r} 8 \\ - 8 \\ \hline \boxed{0} \end{array}$$
 4.
$$\begin{array}{r} 9 \\ - 5 \\ \hline \boxed{4} \end{array}$$

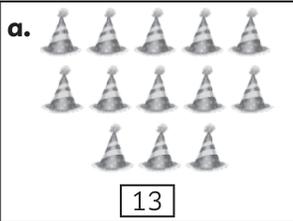
Creative Corner

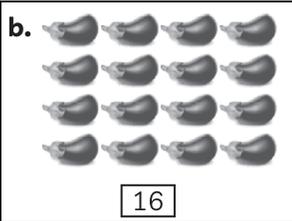
Do yourself with your friends.

4. Counting Number 11 to 50

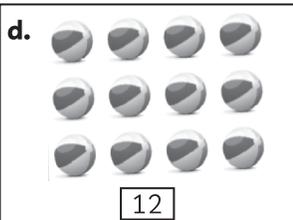
Concept Recap 4.1

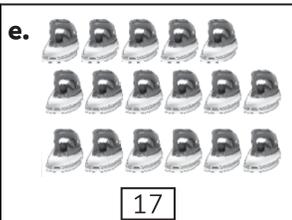
Q.1 Count the objects and write the numbers in the placeholder:

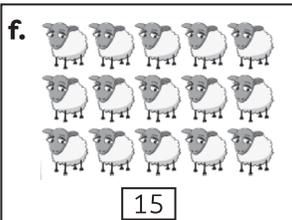
Sol. a. 
$$\boxed{13}$$

b. 
$$\boxed{16}$$

c. 
$$\boxed{14}$$

d. 
$$\boxed{12}$$

e. 
$$\boxed{17}$$

f. 
$$\boxed{15}$$

Q.2 Read, speak and write the numbers and number names:

- Sol.** a. 16 Sixteen b. 19 Nineteen c. 12 Twelve d. 15 Fifteen
 e. 17 Seventeen f. 15 Fifteen g. 20 Twenty h. 19 Nineteen
 i. 13 Thirteen j. 11 Eleven k. 16 Sixteen l. 18 Eighteen

Concept Recap 4.2

Q.1. Fill in the missing numbers:

Sol.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

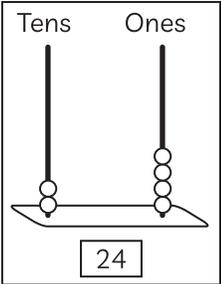
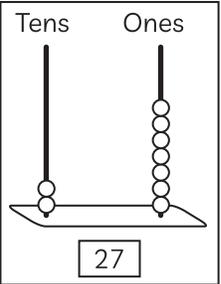
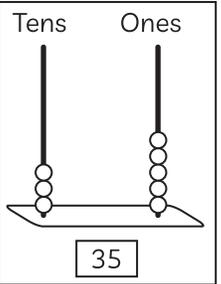
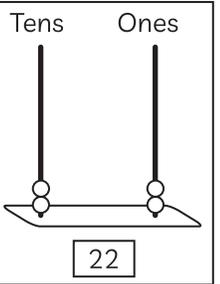
Q.2. Fill in the blanks:

- Sol.** (a) 3 tens and 4 ones = 34
 (b) 5 tens and 0 ones = 50
 (c) 2 tens and 6 ones = 26
 (d) 37 = 3 tens + 7 ones
 (e) 28 = 2 tens + 8 ones
 (f) 44 = 4 tens + 4 ones

Q.3. Write the numbers for the following number names:

- Sol.** (a) thirty-six - 36 (b) twelve - 12
 (c) twenty-one - 21 (d) forty-eight - 48
 (e) sixteen - 16 (f) thirty-nine - 39

Q.4. Count the beads on each abacus and fill in the boxes:

Sol. (a)  (b)  (c)  (d) 

Q.5. Complete the table given below:

Sol.	Before	In Between	After		Before	In Between	After
(a)	28	29	30	(b)	42	43	44
(c)	26	27	28	(d)	19	20	21
(e)	39	40	41				

Q.6. Write the numbers and the number names in placeholder:

- Sol.** (a)

Thirty-six	36
------------	----

 (b)

22	Twenty-two
----	------------

 (c)

Thirty-seven	37
--------------	----

 (d)

31	Thirty-one
----	------------

 (e)

Thirty-eight	38
--------------	----

 (f)

24	Twenty-four
----	-------------

 (g)

Forty-nine	49
------------	----

 (h)

35	Thirty-five
----	-------------

 (i)

Forty	40
-------	----

 (j)

30	Thirty
----	--------

Q.7. Find the suitable number from the box for the given number names and write it in the space:

- Sol.** (a) Two tens and two ones =

22

42	16
----	----

 (b) Three tens and six ones =

36

36	22
----	----

Concept Recap 4.3

Q.1. Put the correct symbol $>$, $<$, or $=$ in the placeholder:

- Sol.** (a)

9	$<$	17
---	-----	----

 (b)

13	$=$	13
----	-----	----

 (c)

17	$<$	20
----	-----	----

 (d)

16	$>$	14
----	-----	----

 (e)

28	$>$	7
----	-----	---

 (f)

28	$>$	23
----	-----	----

Q.2. Fill circles using $>$, $<$, or $=$:

- Sol.** (a)

29	$<$	41
----	-----	----

 (b)

33	$<$	44
----	-----	----

 (c)

39	$>$	16
----	-----	----

 (d)

15	$<$	23
----	-----	----

 (e)

14	$=$	14
----	-----	----

 (f)

38	$>$	15
----	-----	----

Q.3. Write the numbers:

- Sol.** (a)

15	44	27
----	----	----

 (b)

32	5	26
----	---	----

 (c)

38	30	37
----	----	----

 (d)

20	45	46
----	----	----

Q.4. Encircle the biggest number:

- Sol.** (a)

22	32	42
----	----	----

 (b)

29	41	38
----	----	----

 (c)

38	29	17
----	----	----

 (d)

17	25	39
----	----	----

Concept Recap 4.4

Q.1. Arrange the given numbers in ascending order:

- Sol.** (a) 27, 21, 32, 44 21, 27, 32, 44 (b) 35, 29, 46, 50 29, 35, 46, 50
 (c) 31, 12, 50, 9 9, 12, 31, 50 (d) 45, 38, 41, 32 32, 38, 41, 45

Q.2. Arrange the given numbers in descending order:

- Sol.** (a) 14, 43, 25, 36 43, 36, 25, 14 (b) 23, 36, 28, 42 42, 36, 28, 23
(c) 45, 27, 11, 49 49, 45, 27, 11 (d) 26, 41, 23, 48 48, 41, 26, 23

Interactive Practice

Q.1. Write the number names:

- Sol.** (a) 27 Twenty-seven (b) 31 Thirty-one (c) 40 Forty
(d) 19 Nineteen (e) 45 Forty-five (f) 36 Thirty-six

Q.2. Write the numbers:

- Sol.** (a) Twenty-eight 28 (b) Thirty-six 36 (c) Twenty-one 21
(d) Fifty 50

Q.3. Write the number:

- Sol.** (a) 37 38 (b) 40 41 (c) 26 27
(d) 30 31 (e) 44 45 (f) 29 30 31
(g) 42 43 44 (h) 37 38 39

Q.4. Encircle the bigger number:

- Sol.** (a) 9 16 (b) 24 36 (c) 50 45

Q.5. Encircle the smaller number:

- Sol.** (a) 28 49 (b) 44 34 (c) 40 32

Q.6. Arrange in ascending order:

- Sol.** (a) 8 33 15 (b) 38 49 17 (c) 27 12 40
8 15 33 17 38 49 12 27 40

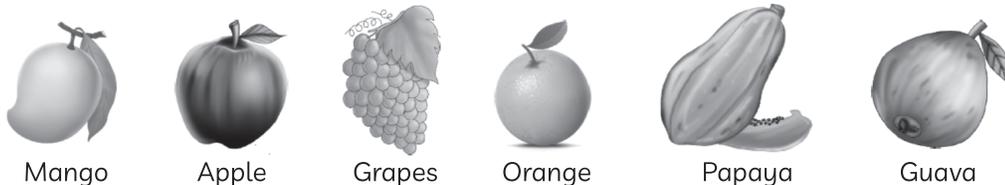
Creative Corner

Do yourself

5. Ordinal Numbers

Concept Recap 5.1

Q.1. Look at the fruits given below and fill in the blanks:



- Sol.** (a) Grapesthird..... (b) Papayafifth..... (c) Applesecond.....
 (d) Guavasixth..... (e) Mangofirst..... (f) Orangefourth.....

Q.2. Colour as instructed:

Sol. Do yourself.

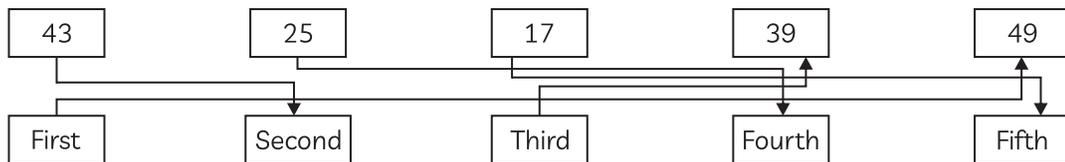
Q.3. Write the order of the letters of English alphabet:

- Sol.** (A) (F) (G) (D)
A-first..... F-sixth..... G-seventh..... D-fourth.....
 (I) (E) (C) (H)
I-ninth..... E-fifth..... C-third..... H-eighth.....

Q.4. Write the position of the following:

- Sol.** (a) The position of D in RED isthird.....
 (b) The position of G in MANGO isfourth.....
 (c) The position of O in PARROT isfifth.....
 (d) The position of M in WATERMELON issixth.....

Creative Corner



6. Counting Numbers 51 to 100

Concept Recap 6.1

Q.1. Write these numbers in the expanded form:

- Sol.** (a) $42 = 4 \text{ tens} + 2 \text{ ones} = 40 + 2$
 (b) $53 = 5 \text{ tens} + 3 \text{ ones} = 50 + 3$
 (c) $64 = 6 \text{ tens} + 4 \text{ ones} = 60 + 4$
 (d) $72 = 7 \text{ tens} + 2 \text{ ones} = 70 + 2$
 (e) $39 = 3 \text{ tens} + 9 \text{ ones} = 30 + 9$
 (f) $81 = 8 \text{ tens} + 1 \text{ ones} = 80 + 1$
 (g) $90 = 9 \text{ tens} + 0 \text{ ones} = 90 + 0$

Q.2. Write these numbers in short form:

- Sol.** (a) 3 tens and 4 ones = 34 (b) 6 tens and 6 ones = 66
 (c) 4 tens and 6 ones = 46 (d) 7 tens and 8 ones = 78
 (e) 5 tens and 0 ones = 50 (f) 8 tens and 9 ones = 89
 (g) 7 tens and 1 one = 71 (h) 9 tens and 3 ones = 93
 (i) 8 tens and 5 ones = 85 (j) 10 tens and 0 ones = 100

Interactive Practice

Q.1. Colour the greater number red:

- Sol.** (a) (27) (47) (b) (15) (17) (c) (89) (98)
 (d) (73) (64) (e) (29) (35) (f) (82) (86)

Q.2. Tick the smaller number:

- Sol.** (a) [32] [] [19] [✓] (b) [83] [✓] [95] [] (c) [76] [✓] [99] []
 (d) [29] [✓] [61] [] (e) [55] [] [30] [✓] (f) [32] [] [6] [✓]

Q.3. Rewrite the following numbers in ascending order:

- Sol.** (a) 44 33 47 22 65 [22] [33] [44] [47] [65]
 (b) 77 98 66 55 32 [32] [55] [66] [77] [98]

Q.4. Rewrite the following numbers in descending order:

- Sol.** (a) 66 23 98 34 45 [98] [66] [45] [34] [23]
 (b) 33 56 87 99 72 [99] [87] [72] [56] [33]

Q.5. Fill in the blanks with $>$, $<$ or $=$:

- Sol.** (a) $25 > 14$ (b) $99 = 99$ (c) $72 > 61$
 (d) $18 < 42$ (e) $55 > 38$ (f) $83 < 100$

Q.6. Write the following in short form:

- Sol.** (a) 9 tens and 2 ones = $\underline{\quad 92 \quad}$ (b) 6 tens and 6 ones = $\underline{\quad 66 \quad}$
 (c) 8 tens and 1 one = $\underline{\quad 81 \quad}$ (d) 7 tens and 7 ones = $\underline{\quad 77 \quad}$

Creative Corner

Do yourself

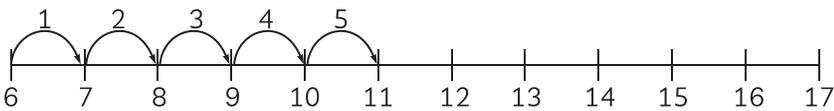
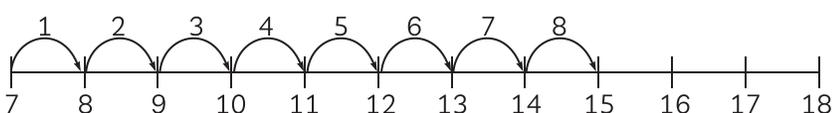
7. Addition

Concept Recap 7.1

Q.1. Add by drawing line:

- (a) $8 + 6 = 14$
 $8 + 6 = \begin{array}{c} 8 \\ \text{|||||} \end{array} + \begin{array}{c} 6 \\ \text{|||||} \end{array} = 14$
 (b) $7 + 8 = 15$
 $7 + 8 = \begin{array}{c} 7 \\ \text{|||||} \end{array} + \begin{array}{c} 8 \\ \text{|||||} \end{array} = 15$
 (c) $3 + 8 = 11$
 $3 + 8 = \begin{array}{c} 3 \\ \text{|||} \end{array} + \begin{array}{c} 8 \\ \text{|||||} \end{array} = 11$
 (d) $6 + 6 = 12$
 $6 + 6 = \begin{array}{c} 6 \\ \text{|||||} \end{array} + \begin{array}{c} 6 \\ \text{|||||} \end{array} = 12$
 (e) $9 + 5 = 14$
 $9 + 5 = \begin{array}{c} 9 \\ \text{|||||} \end{array} + \begin{array}{c} 5 \\ \text{|||||} \end{array} = 14$
 (f) $8 + 8 = 16$
 $8 + 8 = \begin{array}{c} 8 \\ \text{|||||} \end{array} + \begin{array}{c} 8 \\ \text{|||||} \end{array} = 16$

Q.2 Add by forward counting:

- Sol.** (a) $6 + 5 = \boxed{11}$

 (b) $7 + 8 = \boxed{15}$


Concept Recap 7.2

Q. Add the following:

- Sol.**
- | |
|--|
| $64 = \boxed{6}$ tens + $\boxed{4}$ ones |
| $+ 32 = \boxed{3}$ tens + $\boxed{2}$ ones |
| $= \boxed{9}$ tens + $\boxed{6}$ ones |
- | |
|---|
| $71 = \boxed{7}$ tens + $\boxed{1}$ one |
| $+ 8 = \boxed{0}$ tens + $\boxed{8}$ ones |
| $= \boxed{7}$ tens + $\boxed{9}$ ones |
- 1.** $\boxed{64} + \boxed{32} = \boxed{96}$ **2.** $\boxed{71} + \boxed{8} = \boxed{79}$

$$\begin{array}{r}
 53 = \boxed{5} \text{ tens} + \boxed{3} \text{ ones} \\
 + 26 = \boxed{2} \text{ tens} + \boxed{6} \text{ ones} \\
 \hline
 = \boxed{7} \text{ tens} + \boxed{9} \text{ ones}
 \end{array}$$

3. $\boxed{53} + \boxed{26} = \boxed{79}$

$$\begin{array}{r}
 44 = \boxed{4} \text{ tens} + \boxed{4} \text{ ones} \\
 + 33 = \boxed{3} \text{ tens} + \boxed{3} \text{ ones} \\
 \hline
 = \boxed{7} \text{ tens} + \boxed{7} \text{ ones}
 \end{array}$$

5. $\boxed{44} + \boxed{33} = \boxed{77}$

$$\begin{array}{r}
 50 = \boxed{5} \text{ tens} + \boxed{0} \text{ ones} \\
 + 30 = \boxed{3} \text{ tens} + \boxed{0} \text{ ones} \\
 \hline
 = \boxed{8} \text{ tens} + \boxed{0} \text{ ones}
 \end{array}$$

4. $\boxed{50} + \boxed{30} = \boxed{80}$

$$\begin{array}{r}
 81 = \boxed{8} \text{ tens} + \boxed{1} \text{ one} \\
 + 8 = \boxed{0} \text{ tens} + \boxed{8} \text{ ones} \\
 \hline
 = \boxed{8} \text{ tens} + \boxed{9} \text{ ones}
 \end{array}$$

6. $\boxed{81} + \boxed{8} = \boxed{89}$

Concept Recap 7.3

Q.1. Add using tens and ones:

Sol. (a)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 2 \quad 4 \\
 + 3 \quad 5 \\
 \hline
 \boxed{5} \quad \boxed{9}
 \end{array}$$

(b)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 2 \quad 6 \\
 + 7 \quad 3 \\
 \hline
 \boxed{9} \quad \boxed{9}
 \end{array}$$

(c)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 3 \quad 3 \\
 + 4 \quad 5 \\
 \hline
 \boxed{7} \quad \boxed{8}
 \end{array}$$

(d)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 3 \quad 2 \\
 + 6 \quad 5 \\
 \hline
 \boxed{9} \quad \boxed{7}
 \end{array}$$

(e)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 4 \quad 3 \\
 + 3 \quad 4 \\
 \hline
 \boxed{7} \quad \boxed{7}
 \end{array}$$

(f)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 4 \quad 2 \\
 + 2 \quad 5 \\
 \hline
 \boxed{6} \quad \boxed{7}
 \end{array}$$

(g)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 4 \quad 8 \\
 + 5 \quad 0 \\
 \hline
 \boxed{9} \quad \boxed{8}
 \end{array}$$

(h)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 4 \quad 0 \\
 + 3 \quad 6 \\
 \hline
 \boxed{7} \quad \boxed{6}
 \end{array}$$

Q.2. Add tens to tens and ones to ones to find sum:

Sol. (a)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 7 \quad 3 \\
 + 1 \quad 4 \\
 \hline
 \boxed{8} \quad \boxed{7}
 \end{array}$$

(b)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 2 \quad 7 \\
 + 5 \quad 1 \\
 \hline
 \boxed{7} \quad \boxed{8}
 \end{array}$$

(c)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 5 \quad 6 \\
 + 2 \quad 2 \\
 \hline
 \boxed{7} \quad \boxed{8}
 \end{array}$$

(d)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 3 \quad 5 \\
 + 4 \quad 4 \\
 \hline
 \boxed{7} \quad \boxed{9}
 \end{array}$$

(e)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 8 \quad 1 \\
 + 1 \quad 7 \\
 \hline
 \boxed{9} \quad \boxed{8}
 \end{array}$$

(f)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 5 \quad 4 \\
 + 3 \quad 3 \\
 \hline
 \boxed{8} \quad \boxed{7}
 \end{array}$$

(g)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 6 \quad 1 \\
 + 1 \quad 6 \\
 \hline
 \boxed{7} \quad \boxed{7}
 \end{array}$$

(h)
$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 2 \quad 1 \\
 + 3 \quad 5 \\
 \hline
 \boxed{5} \quad \boxed{6}
 \end{array}$$

Story Sums on Addition

Sol. 1.

$$\begin{array}{r} \text{T O} \\ 4 \ 2 \\ + 2 \ 4 \\ \hline 6 \ 6 \end{array}$$

2.

$$\begin{array}{r} \text{T O} \\ 4 \ 0 \\ + \ \ 6 \\ \hline 4 \ 6 \end{array}$$

3.

$$\begin{array}{r} \text{T O} \\ 4 \ 3 \\ + 2 \ 4 \\ \hline 6 \ 7 \end{array}$$

Concept Recap 7.4

Q.1. Add the following:

Sol.

(a)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 2 \ 8 \\ + 3 \ 9 \\ \hline 6 \ 7 \end{array}$$

(b)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 1 \ 9 \\ + 3 \ 6 \\ \hline 5 \ 5 \end{array}$$

(c)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 2 \ 6 \\ + 2 \ 9 \\ \hline 5 \ 5 \end{array}$$

(a)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 1 \ 8 \\ + 1 \ 7 \\ \hline 3 \ 5 \end{array}$$

(e)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 2 \ 5 \\ + 2 \ 7 \\ \hline 5 \ 2 \end{array}$$

(f)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 4 \ 9 \\ + \ \ 8 \\ \hline 5 \ 7 \end{array}$$

(g)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ \ \ 8 \\ + 3 \ 6 \\ \hline 4 \ 4 \end{array}$$

(h)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 3 \ 5 \\ + 4 \ 7 \\ \hline 8 \ 2 \end{array}$$

Q.2. Find the sum:

Sol.

(a)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 2 \ 8 \\ + 4 \ 7 \\ \hline 7 \ 5 \end{array}$$

(b)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 4 \ 6 \\ + 3 \ 9 \\ \hline 8 \ 5 \end{array}$$

(c)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 5 \ 2 \\ + 1 \ 8 \\ \hline 7 \ 0 \end{array}$$

(a)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 3 \ 9 \\ + 2 \ 6 \\ \hline 6 \ 5 \end{array}$$

(e)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 3 \ 6 \\ + 6 \ 5 \\ \hline 10 \ 1 \end{array}$$

(f)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 5 \ 7 \\ + 3 \ 8 \\ \hline 9 \ 5 \end{array}$$

(g)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 6 \ 8 \\ + 8 \ 6 \\ \hline 15 \ 4 \end{array}$$

(h)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 4 \ 5 \\ + 5 \ 6 \\ \hline 10 \ 1 \end{array}$$

(i)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 4 \ 8 \\ + 2 \ 7 \\ \hline 7 \ 5 \end{array}$$

(j)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 2 \ 6 \\ + 3 \ 8 \\ \hline 6 \ 4 \end{array}$$

(k)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 6 \ 4 \\ + 3 \ 9 \\ \hline 10 \ 3 \end{array}$$

(l)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 6 \ 9 \\ + 9 \ 2 \\ \hline 16 \ 1 \end{array}$$

Concept Recap 7.5

Q.1. Add the following:

Sol.

T	O
1	
3	4
4	6
+	3 9
11	9

T	O
1	
4	2
3	7
+	8 4
16	3

T	O
1	
6	3
2	4
+	2 5
11	2

T	O
1	
8	2
2	6
+	1 5
12	3

T	O
1	
2	6
9	4
+	4 5
16	5

T	O
2	
6	7
7	8
+	2 9
17	4

T	O
1	
6	8
2	5
+	4 3
13	6

T	O
1	
3	4
2	8
+	3 3
9	5

Q.2. Find the sum:

Sol.

T	O
1	
3	2
2	6
+	1 9
7	7

T	O
2	
7	7
4	7
+	5 8
18	2

T	O
1	
9	2
2	5
+	2 8
14	5

T	O
2	
4	8
3	9
+	6 4
15	1

T	O
2	
1	8
2	9
+	4 6
9	3

T	O
1	
6	7
2	3
+	5 7
14	7

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

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

Story Sums on Addition

1.	T	O
	1	
	2	6
	+	1 8
	4	4

2.	T	O
	1	
	8	2
	+	4 8
	13	0

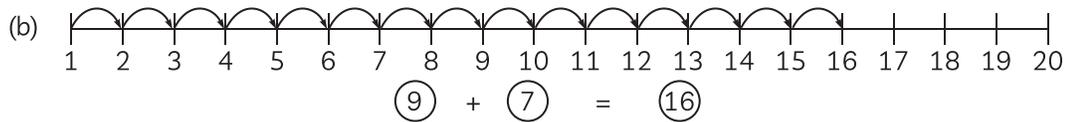
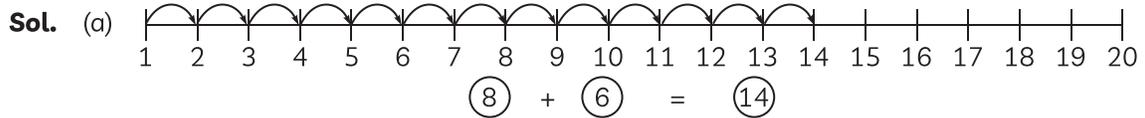
3.	T	O
	1	
	4	9
	+	5 8
	10	7

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

5.	T	O
	2	
	3	4
	2	9
	+	4 7
	11	0

Interactive Practice

Q.1. Find the sum on number line:



Q.2. Find the sum:

Sol. (a) $2 + 3 + 8 = \boxed{13}$

(b) $6 + 4 + 7 = \boxed{17}$

(c) $7 + 8 + 2 = \boxed{17}$

(d) $8 + 5 + 6 = \boxed{19}$

Q.3. Add:

Sol. (a)
$$\begin{array}{r} 24 \\ + 35 \\ \hline 59 \end{array}$$

(b)
$$\begin{array}{r} 37 \\ + 21 \\ \hline 58 \end{array}$$

(c)
$$\begin{array}{r} 46 \\ + 22 \\ \hline 68 \end{array}$$

(d)
$$\begin{array}{r} 51 \\ + 43 \\ \hline 94 \end{array}$$

Q.4. Surbhi scores 27 runs and Divya scores 45 runs. How many runs do they score together?

Sol. They scored 72 runs.

$$\begin{array}{r} \text{T O} \\ 27 \\ + 45 \\ \hline 72 \end{array}$$

Q.5. There are 44 children in class 1 A and 26 children in class 1 B. How many children are there in all?

Sol. There are 70 children.

$$\begin{array}{r} \text{T O} \\ 44 \\ + 26 \\ \hline 70 \end{array}$$

Creative Corner

Christmas has arrived and it is time to dress up like Santa. One element is missing and hidden here. Can you see it yet? If not, solve the problems and follow the instructions to find one. Colour the blocks as:

'Red': Where the answer is '62'.

'Yellow' Where the answer is '93'.

Sol.

8. Subtraction

Concept Recap 8.1

Q.1. Cross out the picture to get the result:

Sol.

(a) $\boxed{16} - \boxed{7} = \boxed{9}$

(b) $\boxed{19} - \boxed{8} = \boxed{11}$

(c) $\boxed{15} - \boxed{9} = \boxed{6}$

(d) $\boxed{17} - \boxed{5} = \boxed{12}$

(e) $\boxed{14} - \boxed{6} = \boxed{8}$

(f) $\boxed{12} - \boxed{7} = \boxed{5}$

Q.2. Draw lines then cross out to subtract. One has been done for you:

Sol.

(a)

T	O
1	5
-	6
9	

(b)

T	O
1	7
-	8
9	

(c)

T	O
1	2
-	7
5	

(d)

T	O
1	6
-	6
1	0

(e)

T	O
1	3
-	8
	5

(f)

T	O
1	2
-	5
	7

Q.3. Subtract with the help of number line:

Sol. (a) $18 - 3 = 15$

(b) $19 - 7 = 12$

(c) $12 - 9 = 3$

(d) $14 - 8 = 6$

Concept Recap 8.2

Q.1. Subtract and write in the box:

<p>1.</p> $64 = 6 \text{ tens} + 4 \text{ ones}$ $- 51 = 5 \text{ tens} + 1 \text{ ones}$ <hr/> $13 = 1 \text{ tens} + 3 \text{ ones}$ <p>3.</p> $78 = 7 \text{ tens} + 8 \text{ ones}$ $- 34 = 3 \text{ tens} + 4 \text{ ones}$ <hr/> $44 = 4 \text{ tens} + 4 \text{ ones}$ <p>5.</p> $87 = 8 \text{ tens} + 7 \text{ ones}$ $- 43 = 4 \text{ tens} + 3 \text{ ones}$ <hr/> $44 = 4 \text{ tens} + 4 \text{ ones}$	<p>2.</p> $46 = 4 \text{ tens} + 6 \text{ ones}$ $- 22 = 2 \text{ tens} + 2 \text{ ones}$ <hr/> $24 = 2 \text{ tens} + 4 \text{ ones}$ <p>4.</p> $93 = 9 \text{ tens} + 3 \text{ ones}$ $- 50 = 5 \text{ tens} + 0 \text{ ones}$ <hr/> $43 = 4 \text{ tens} + 3 \text{ ones}$ <p>6.</p> $84 = 8 \text{ tens} + 4 \text{ ones}$ $- 54 = 5 \text{ tens} + 4 \text{ ones}$ <hr/> $30 = 3 \text{ tens} + 0 \text{ ones}$
---	---

Concept Recap 8.3

Q.1. Subtract:

<p>Sol. (a)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>7</td><td>6</td></tr><tr><td>-</td><td>5 3</td></tr><tr><td>2</td><td>3</td></tr></table>	T	O	7	6	-	5 3	2	3	<p>(b)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>9</td><td>0</td></tr><tr><td>-</td><td>4 0</td></tr><tr><td>5</td><td>0</td></tr></table>	T	O	9	0	-	4 0	5	0	<p>(c)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>6</td><td>9</td></tr><tr><td>-</td><td>3 5</td></tr><tr><td>3</td><td>4</td></tr></table>	T	O	6	9	-	3 5	3	4	<p>(d)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>8</td><td>6</td></tr><tr><td>-</td><td>5 3</td></tr><tr><td>3</td><td>3</td></tr></table>	T	O	8	6	-	5 3	3	3
T	O																																		
7	6																																		
-	5 3																																		
2	3																																		
T	O																																		
9	0																																		
-	4 0																																		
5	0																																		
T	O																																		
6	9																																		
-	3 5																																		
3	4																																		
T	O																																		
8	6																																		
-	5 3																																		
3	3																																		
<p>(e)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>5</td><td>8</td></tr><tr><td>-</td><td>3 2</td></tr><tr><td>2</td><td>6</td></tr></table>	T	O	5	8	-	3 2	2	6	<p>(f)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>9</td><td>4</td></tr><tr><td>-</td><td>7 4</td></tr><tr><td>2</td><td>0</td></tr></table>	T	O	9	4	-	7 4	2	0	<p>(g)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>6</td><td>8</td></tr><tr><td>-</td><td>2 3</td></tr><tr><td>4</td><td>5</td></tr></table>	T	O	6	8	-	2 3	4	5	<p>(h)</p> <table border="1" style="width: 100%;"><tr><td>T</td><td>O</td></tr><tr><td>8</td><td>9</td></tr><tr><td>-</td><td>5 4</td></tr><tr><td>3</td><td>5</td></tr></table>	T	O	8	9	-	5 4	3	5
T	O																																		
5	8																																		
-	3 2																																		
2	6																																		
T	O																																		
9	4																																		
-	7 4																																		
2	0																																		
T	O																																		
6	8																																		
-	2 3																																		
4	5																																		
T	O																																		
8	9																																		
-	5 4																																		
3	5																																		

Q.2. Subtract:

Sol. (a)

	T	O
	4	5
-	3	1
	1	4

(b)

	T	O
	6	4
-	6	1
	0	3

(c)

	T	O
	8	3
-	6	0
	2	3

(d)

	T	O
	5	7
-		4
	5	3

(e)

	T	O
	9	6
-		3
	9	3

(f)

	T	O
	3	6
-		2
	3	4

(g)

	T	O
	2	6
-		3
	2	3

(h)

	T	O
	6	6
-		6
	6	0

Concept Recap 8.4

Q.1. Subtract the following:

Sol. (a)

	T	O
	7	17
	8	7
-	3	9
	4	8

(b)

	T	O
	3	12
	4	2
-	2	5
	1	7

(c)

	T	O
	6	14
	7	4
-	3	5
	3	9

(d)

	T	O
	7	11
	8	1
-	4	9
	3	2

(e)

	T	O
	5	13
	6	3
-	2	8
	3	5

(f)

	T	O
	4	10
	5	0
-	4	8
	0	2

(g)

	T	O
	8	10
	9	0
-	8	8
	0	2

(h)

	T	O
	7	14
	8	4
-	4	6
	3	8

Q.2. Subtract the following:

Sol. (a)

	T	O
	4	10
	5	0
-	2	7
	2	3

(b)

	T	O
	3	10
	4	0
-	2	9
	1	1

(c)

	T	O
	8	13
	9	3
-	4	6
	4	7

(d)

	T	O
	5	12
	6	2
-	5	9
	0	3

(e)

	T	O
	2	12
	3	2
-	1	9
	1	3

(f)

	T	O
	3	11
	4	1
-	2	6
	1	5

(g)

	T	O
	5	10
	6	0
-	4	6
	1	4

(h)

	T	O
	6	13
	7	3
-	3	8
	3	5

$$\begin{array}{r} \text{T} \quad \text{O} \\ \boxed{6} \quad \boxed{12} \\ 7 \quad 2 \\ - 4 \quad 5 \\ \hline \boxed{2} \quad \boxed{7} \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ \boxed{5} \quad \boxed{11} \\ 6 \quad 1 \\ - 4 \quad 5 \\ \hline \boxed{1} \quad \boxed{6} \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ \boxed{7} \quad \boxed{14} \\ 8 \quad 4 \\ - 5 \quad 6 \\ \hline \boxed{2} \quad \boxed{8} \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ \boxed{2} \quad \boxed{15} \\ 3 \quad 5 \\ - 8 \\ \hline \boxed{2} \quad \boxed{7} \end{array}$$

Story Sums on Subtraction

Sol. 1.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 8 \\ - 2 \quad 3 \\ \hline \boxed{2} \quad \boxed{5} \end{array}$$
 Now, 25 books are left in the shelf

2.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 6 \quad 7 \\ - 1 \quad 6 \\ \hline \boxed{5} \quad \boxed{1} \end{array}$$
 51 Children were present in the class.

3.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 8 \\ - 1 \quad 2 \\ \hline \boxed{2} \quad \boxed{6} \end{array}$$
 26 apples are fresh.

4.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 6 \\ - 2 \quad 9 \\ \hline \boxed{0} \quad \boxed{7} \end{array}$$
 7 pens are not working.

5.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 9 \quad 2 \\ - 7 \quad 6 \\ \hline \boxed{1} \quad \boxed{6} \end{array}$$
 There are 16 girls.

Concept Recap 8.5

Q. Fill in the blanks:

Sol. (1) $\boxed{4} + \boxed{9} = \boxed{13}$ \longrightarrow $\boxed{13} - \boxed{4} = \boxed{9}$ and $\boxed{13} - \boxed{9} = \boxed{4}$

(2) $\boxed{5} + \boxed{8} = \boxed{13}$ \longrightarrow $\boxed{13} - \boxed{5} = \boxed{8}$ and $\boxed{13} - \boxed{8} = \boxed{5}$

(3) $\boxed{16} - \boxed{5} = \boxed{11}$ \longrightarrow $\boxed{16} - \boxed{11} = \boxed{5}$ and $\boxed{5} + \boxed{11} = \boxed{16}$

(4) $\boxed{22} - \boxed{7} = \boxed{15}$ \longrightarrow $\boxed{22} - \boxed{15} = \boxed{7}$ and $\boxed{15} + \boxed{7} = \boxed{22}$

Interactive Practice

Q.1. Subtract:

Sol. (a) $16 - 9 = \boxed{7}$

(b) $17 - 3 = \boxed{14}$

(c) $18 - 8 = \boxed{10}$

(d) $13 - 5 = \boxed{8}$

(e) $21 - 6 = \boxed{15}$

(f) $24 - 9 = \boxed{15}$

Q.2. Subtract:

Sol. (a)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 6 \quad 0 \\ - 5 \quad 0 \\ \hline \boxed{1} \quad \boxed{0} \end{array}$$

(b)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 8 \\ - 2 \quad 6 \\ \hline \boxed{1} \quad \boxed{2} \end{array}$$

(c)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 2 \quad 9 \\ - 2 \quad 8 \\ \hline \boxed{0} \quad \boxed{1} \end{array}$$

(d)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 5 \\ - 3 \quad 4 \\ \hline \boxed{1} \quad \boxed{1} \end{array}$$

Q.3. Subtract:

Sol. (a)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 12 \\ 5 \quad 2 \\ - 2 \quad 7 \\ \hline 2 \quad 5 \end{array}$$
 (b)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 13 \\ 4 \quad 3 \\ - 3 \quad 6 \\ \hline 0 \quad 7 \end{array}$$
 (c)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 8 \quad 11 \\ 9 \quad 1 \\ - 5 \quad 7 \\ \hline 3 \quad 4 \end{array}$$
 (d)
$$\begin{array}{r} \text{T} \quad \text{O} \\ 7 \quad 13 \\ 8 \quad 3 \\ - 4 \quad 8 \\ \hline 3 \quad 5 \end{array}$$

Sol. 4.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 4 \\ - 1 \quad 3 \\ \hline 2 \quad 1 \end{array}$$
 21 passengers are left.

5.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 7 \quad 9 \\ - 5 \quad 2 \\ \hline 2 \quad 7 \end{array}$$
 There are 27 apple in the orchard.

6.
$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 12 \\ 4 \quad 2 \\ - 2 \quad 5 \\ \hline 1 \quad 7 \end{array}$$
 17 monkeys are still awake.

Creative Corner

Do yourself

9. Lines And Shapes

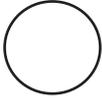
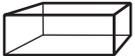
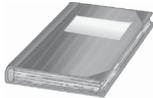
Concept Recap 9.1

Do yourself.

Concept Recap 9.2

Q. Tick (✓) the figure that have the same shape with first:

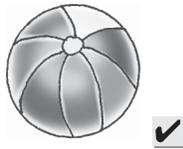
Sol.

			 ✓
			 ✓
			 ✓
	 ✓		
	 ✓		

Concept Recap 9.3

Q.1. Tick (✓) the objects that will roll:

Sol.



Q.2. Tick (✓) the objects that will slide:

Sol.



Interactive Practice

- | | | |
|-------------------|--------------|-----------|
| 1. Straight line, | 2. Triangle, | 3. Circle |
| 4. Square, | 5. Rectangle | 6. Oval |
| 7. Rectangle | | |

Creative Corner

Do yourself

10. Multiplication

Concept Recap 10.1

Fill in the boxes:

Sol.

1.



$$= 2 + 2 + 2 + 2 = \boxed{8}$$

$$= 4 \times 2 = \boxed{8}$$

2.



$$= 5 + 5 + 5 + 5 + 5 = \boxed{25}$$

$$\boxed{5} \times \boxed{5} = \boxed{25}$$

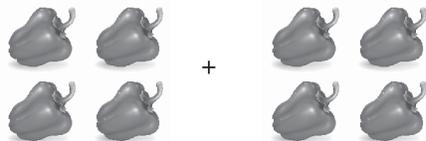
3.



$$= 3 + 3 + 3 + 3 + 3 = \boxed{15}$$

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

4.



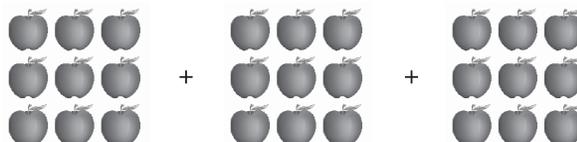
$$= \begin{array}{l} 4 + 4 = \boxed{8} \\ \boxed{2} \times \boxed{4} = \boxed{8} \end{array}$$

5.



$$= \begin{array}{l} \boxed{5 + 5 + 5} = \boxed{15} \\ \boxed{3} \times \boxed{5} = \boxed{15} \end{array}$$

6.



$$= \begin{array}{l} \boxed{9 + 9 + 9} = \boxed{27} \\ \boxed{3} \times \boxed{9} = \boxed{27} \end{array}$$

Concept Recap 10.2

Q. Write the multiplication fact for each of the following:

Sol.

Repeated Addition

1. $2+2+2=6$

2. $3+3=6$

3. $3+3+3+3=12$

4. $2+2+2+2+2=10$

5. $4+4+4+4=16$

6. $3+3+3+3+3=15$

7. $5+5+5+5=20$

Multiplication Facts

$3 \times 2 = 6$

$3 \times 2 = 6$

$4 \times 3 = 12$

$5 \times 2 = 10$

$4 \times 4 = 16$

$5 \times 3 = 15$

$5 \times 4 = 20$

Concept Recap 10.3

Q. Fill in the boxes:

1. $3 \times 6 = 18$

2. $5 \times 2 = 10$

3. $4 \times 1 = 4$

4. $6 \times 8 = 48$

5. $6 \times 9 = 54$

6. $5 \times 3 = 15$

7. $5 \times 1 = 5$

8. $2 \times 7 = 14$

9. $3 \times 8 = 24$

10. $2 \times 9 = 18$

11. $5 \times 7 = 35$

12. $2 \times 8 = 16$

13. $4 \times 9 = 36$

14. $4 \times 6 = 24$

15. $3 \times 5 = 15$

Concept Recap 10.4

Q. Find the product:

1.
$$\begin{array}{r} \text{T O} \\ 5 \\ \times 4 \\ \hline \end{array}$$

2.
$$\begin{array}{r} \text{T O} \\ 9 \\ \times 6 \\ \hline \end{array}$$

3.
$$\begin{array}{r} \text{T O} \\ 4 \\ \times 3 \\ \hline \end{array}$$

4.
$$\begin{array}{r} \text{T O} \\ 7 \\ \times 4 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \text{T O} \\ 6 \\ \times 5 \\ \hline \end{array}$$

6.
$$\begin{array}{r} \text{T O} \\ 7 \\ \times 6 \\ \hline \end{array}$$

7.
$$\begin{array}{r} \text{T O} \\ 8 \\ \times 5 \\ \hline \end{array}$$

8.
$$\begin{array}{r} \text{T O} \\ 7 \\ \times 3 \\ \hline \end{array}$$

9.
$$\begin{array}{r} \text{T O} \\ 4 \\ \times 6 \\ \hline 24 \end{array}$$

10.
$$\begin{array}{r} \text{T O} \\ 9 \\ \times 5 \\ \hline 45 \end{array}$$

11.
$$\begin{array}{r} \text{T O} \\ 8 \\ \times 3 \\ \hline 24 \end{array}$$

12.
$$\begin{array}{r} \text{T O} \\ 9 \\ \times 3 \\ \hline 27 \end{array}$$

Concept Recap 10.5

Q. Multiply:

Sol. 1.
$$\begin{array}{r} \text{T O} \\ 32 \\ \times 3 \\ \hline 96 \end{array}$$

2.
$$\begin{array}{r} \text{T O} \\ 42 \\ \times 2 \\ \hline 84 \end{array}$$

3.
$$\begin{array}{r} \text{T O} \\ 28 \\ \times 1 \\ \hline 28 \end{array}$$

4.
$$\begin{array}{r} \text{T O} \\ 24 \\ \times 2 \\ \hline 48 \end{array}$$

5.
$$\begin{array}{r} \text{T O} \\ 15 \\ \times 1 \\ \hline 15 \end{array}$$

6.
$$\begin{array}{r} \text{T O} \\ 62 \\ \times 1 \\ \hline 62 \end{array}$$

7.
$$\begin{array}{r} \text{T O} \\ 44 \\ \times 2 \\ \hline 88 \end{array}$$

8.
$$\begin{array}{r} \text{T O} \\ 22 \\ \times 3 \\ \hline 66 \end{array}$$

Story Sums on Multiplication

Sol. 1.
$$\begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}$$
 7 Cats have 14 eyes.

2.
$$\begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array}$$
 There are 16 sunglasses.

3.
$$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$$
 There are 15 hands.

4.
$$\begin{array}{r} 5 \\ \times 6 \\ \hline 30 \end{array}$$
 There are 30 packets.

5.
$$\begin{array}{r} 4 \\ \times 6 \\ \hline 24 \end{array}$$
 There are 24 feet.

6.
$$\begin{array}{r} 6 \\ \times 8 \\ \hline 48 \end{array}$$
 Total wheels are 48.

Interactive Practice

Q.1. Write these repeated addition as multiplication:

Sol. (a) $2 + 2 + 2 + 2 + 2 = 2 \times 5 = 10$

(b) $5 + 5 + 5 = 5 \times 3 = 15$

(c) $6 + 6 + 6 + 6 = 6 \times 4 = 24$

(d) $7 + 7 + 7 + 7 + 7 + 7 = 7 \times 6 = 42$

Q.2. Write these multiplication as repeated addition:

Sol. (a) $5 \times 6 = 5 + 5 + 5 + 5 + 5 + 5 = 30$

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

(c) $4 \times 5 = 4 + 4 + 4 + 4 + 4 = 20$

(d) $2 \times 8 = 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 16$

Q.3. Find the product:

Sol. (a) $6 \times 9 = 54$

(b) $4 \times 7 = 28$

(c) $3 \times 8 = 24$

(d) $2 \times 5 = 10$

(e) $3 \times 3 = 9$

(f) $6 \times 6 = 36$

Q.4. Multiply:

Sol. (a)
$$\begin{array}{r} \text{T O} \\ 4 \\ \times 5 \\ \hline \boxed{20} \end{array}$$

(b)
$$\begin{array}{r} \text{T O} \\ 3 \\ \times 6 \\ \hline \boxed{18} \end{array}$$

(c)
$$\begin{array}{r} \text{T O} \\ 5 \\ \times 5 \\ \hline \boxed{25} \end{array}$$

(d)
$$\begin{array}{r} \text{T O} \\ 4 \\ \times 4 \\ \hline \boxed{16} \end{array}$$

Q.5. Multiply:

Sol. (a)
$$\begin{array}{r} \text{T O} \\ 32 \\ \times 2 \\ \hline \boxed{64} \end{array}$$

(b)
$$\begin{array}{r} \text{T O} \\ 33 \\ \times 3 \\ \hline \boxed{99} \end{array}$$

(c)
$$\begin{array}{r} \text{T O} \\ 44 \\ \times 2 \\ \hline \boxed{88} \end{array}$$

(d)
$$\begin{array}{r} \text{T O} \\ 89 \\ \times 1 \\ \hline \boxed{89} \end{array}$$

Sol. 6.
$$\begin{array}{r} 8 \\ \times 5 \\ \hline \boxed{40} \end{array}$$

5 boxes have 40 crayons.

7.
$$\begin{array}{r} 24 \\ \times 2 \\ \hline \boxed{48} \end{array}$$

There are 48 sweets in all.

Interactive Practice

Q. Solve the puzzle on these envelopes. Now arrange the letters in ascending order of the number on the envelope.

Sol.

Y

C

$$\begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array}$$

L

$$\begin{array}{r} 3 \\ \times 9 \\ \hline 27 \end{array}$$

ER

$$\begin{array}{r} 6 \\ \times 4 \\ \hline 24 \end{array}$$

S

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$$

E

$$\begin{array}{r} 5 \\ \times 5 \\ \hline 25 \end{array}$$

I

$$\begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array}$$

N

$$\begin{array}{r} 6 \\ \times 3 \\ \hline 18 \end{array}$$

What word do you use to end a letter?

12 16 18 20 24 25 27 36
S I N C ER E L Y

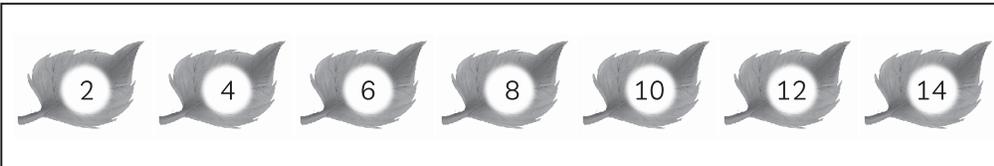


11. Skip Counting And Patterns

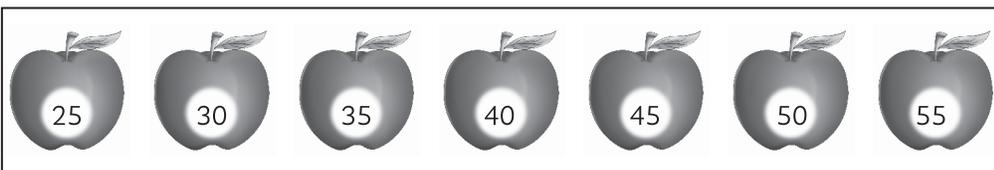
Concept Recap 11.1

Q.1-2. Do yourself.

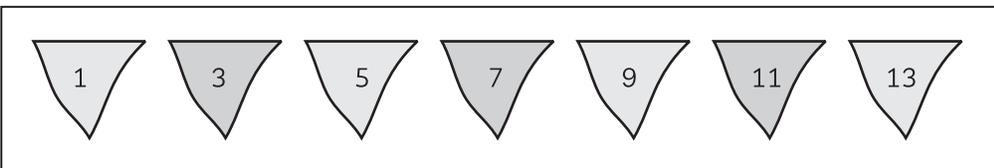
Q.3. Complete the pattern:

Sol. (a) 

(b) 

(c) 

Q.4. Study the pattern and fill in the missing numbers:

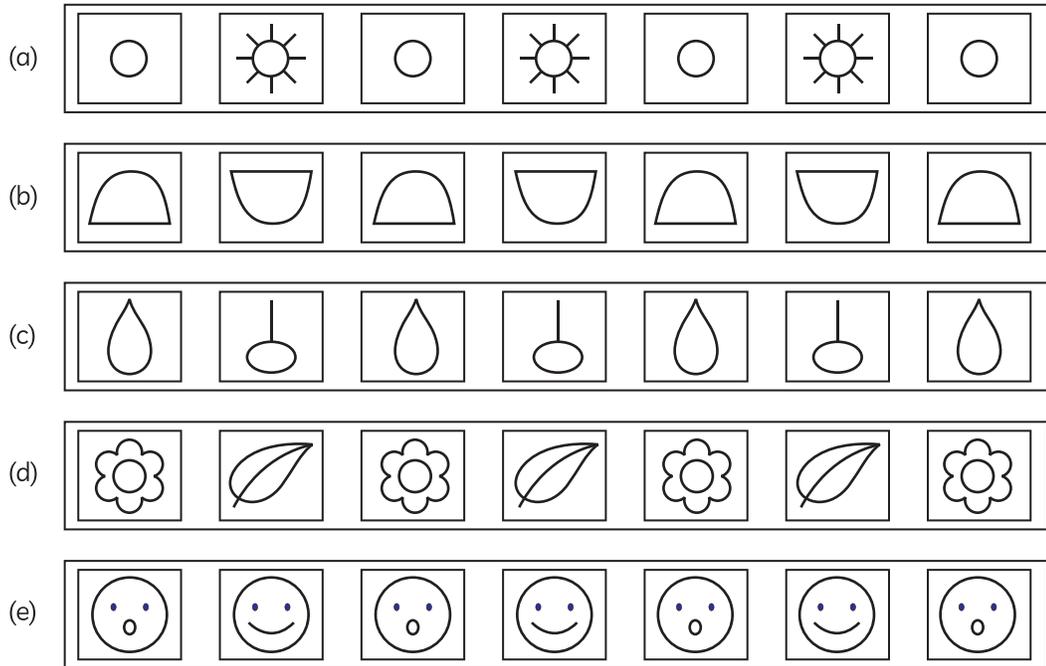
(a) 

(b) 

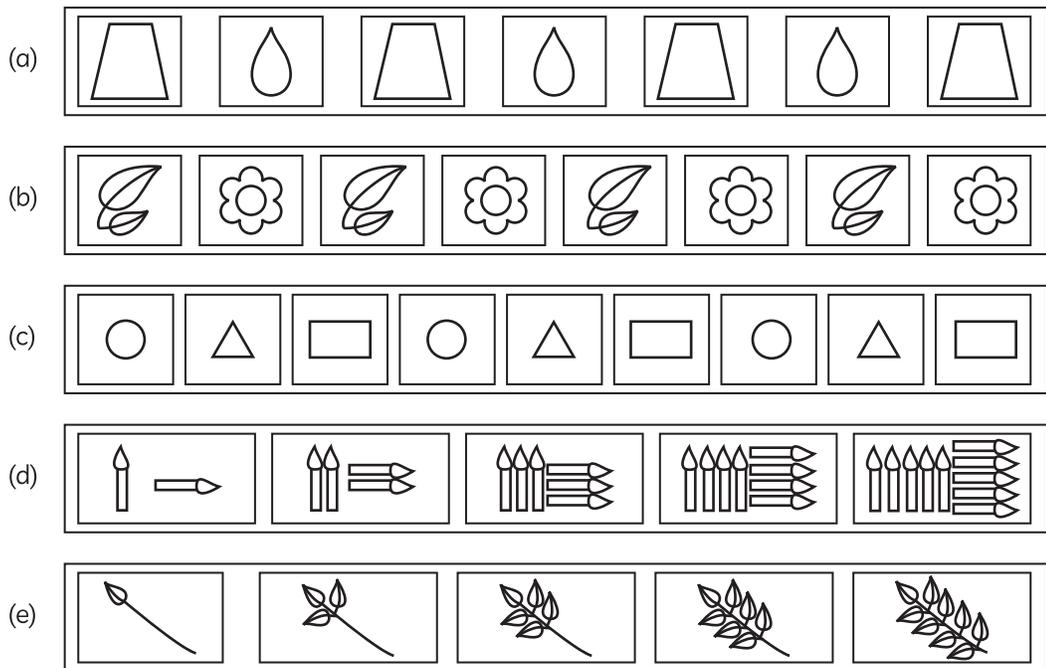
(c) 

Concept Recap 11.2

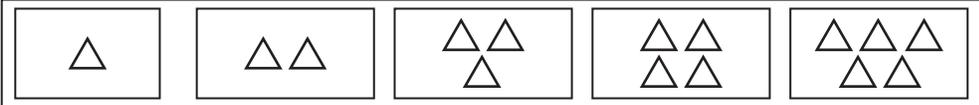
Q.1. What comes next in the sequence:

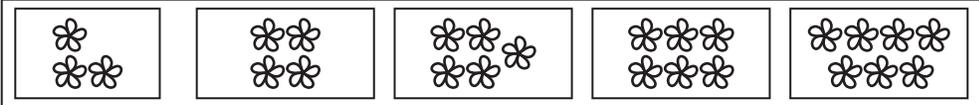


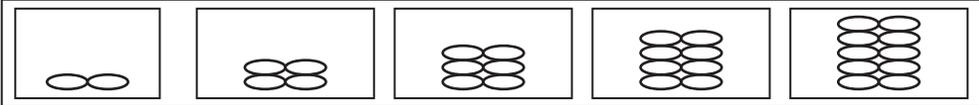
Q.2. Fill in the boxes in the sequence:

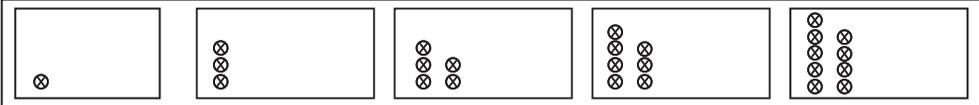


Q.3. Complete the pattern:

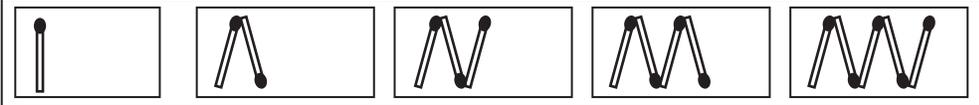
(a) 

(b) 

(c) 

(d) 

(e) 

(f) 

12. Time

Concept Recap 12.1

Q.1. Look at the picture and write the part of the day for the activity shown below. Write 'M' for 'morning', 'A' for 'afternoon', 'E' for 'evening' and 'N' for 'night'.

Sol.

(a)  M

(b)  M

(c)  M

(d)  A

(e)  E

(f)  E

(g)  N

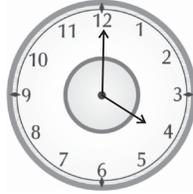
(h)  N

Q.2. Do yourself

Concept Recap 12.2

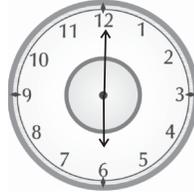
Q. Write the time shown by each of the following clocks. One has been done for you.

Sol. 1.



4 o' clock
4:00

2.



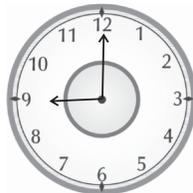
6 o' clock
6:00

3.



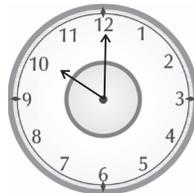
8 o' clock
8:00

4.



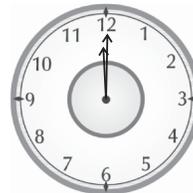
9 o' clock
9:00

5.



10 o' clock
10:00

6.



12 o' clock
12:00

Concept Recap 12.3

Q. Write the time shown by each of the following clocks. One has been done for you.

Sol. 1.

I get up at **6 o'clock** in morning.

2.

I take my breakfast at **7 o' clock** in the **morning**.

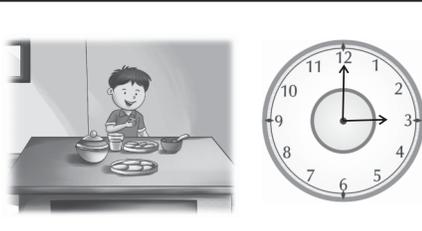
3.

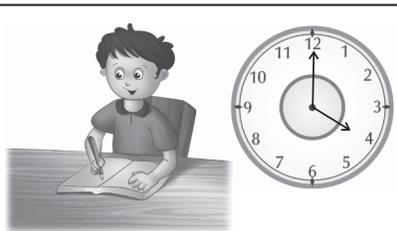
I go to school at **8 o' clock** in the **morning**.

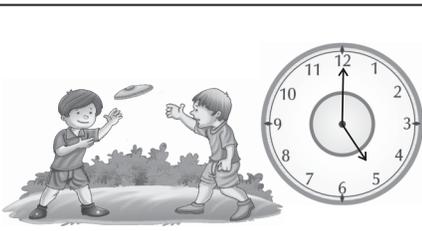
4.

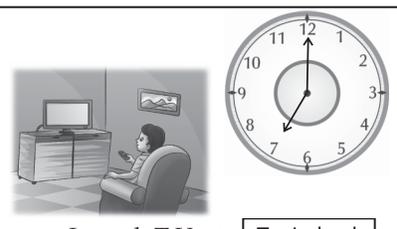
It's break time in school at **10 o' clock**.

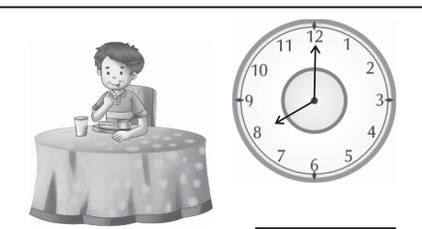
5.  I come back home from school at **2 o' clock** afternoon.

6.  I take lunch at **3 o' clock** afternoon.

7.  I do my home work up to **4 o' clock** .

8.  I go to play at **5 o' clock** .

9.  I watch T.V. at **7 o' clock** in the **evening** .

10.  I take my dinner at **8 o' clock** in the **night**.

Concept Recap 12.4

Q.1. Answer the following questions:

- | | |
|---|------------------|
| Sol. (a) Which is the sixth day of the week? | <u>Saturday</u> |
| (b) Which is the second day of the week? | <u>Tuesday</u> |
| (c) Which day comes before Thursday? | <u>Wednesday</u> |
| (d) Which day comes after Tuesday? | <u>Wednesday</u> |
| (e) Which day lies in between Friday and Sunday? | <u>Saturday</u> |
| (f) Which day lies in between Tuesday and Thursday? | <u>Wednesday</u> |
| (g) Which day comes after Sunday? | <u>Monday</u> |

Q.2. Fill in the blanks:

- Sol.** (a) There are seven days in a week.
(b) Monday is the first day of the week.
(c) Wednesday is the third day of the week.
(d) Fifth day of the week is friday.
(e) Sunday is the seventh day of the week.

Concept Recap 12.5

Q. Answer the following questions:

- | | |
|--|------------------|
| 1. How many months are there in a year? | <u>Twelve</u> |
| 2. Which is the first month of the year? | <u>January</u> |
| 3. Which month comes before February? | <u>January</u> |
| 4. Which month comes before March? | <u>February</u> |
| 5. Which month comes after May? | <u>June</u> |
| 6. Which month comes before June? | <u>May</u> |
| 7. Which month comes after October? | <u>November</u> |
| 8. Which month comes after August? | <u>September</u> |
| 9. Which month lies in between August and October? | <u>September</u> |
| 10. Which month comes in between July and September? | <u>August</u> |
| 11. Which is the sixth month of the year? | <u>June</u> |
| 12. Which is the eleventh month of the year? | <u>November</u> |

Creative Corner

Do yourself

13. Money

Concept Recap 13.1

Q.1. Write the value of the following combinations of coins or notes. You can often use skip counting when you need to count money:

Sol. (a)  + + + + +
2 → 4 → 6 → 8 → 10 → ₹ 10

(b)  + + + + +
₹ 25

(c)  + + + + +
₹ 50

Q.2. What is total amount given below? When you have different amounts, start with biggest amount first:

Sol. (a)  + + + +
5 → 7 → 8 → 9 → ₹ 29

(b)  + + + +
₹ 22

(c)  + + + +
₹ 43

Q.3. Fill in the blanks:

Sol. (a)  -  = ₹ 3

(b)  -  = ₹ 4

(c)  -  = ₹ 1

(d)  -  = ₹ 8

Q.4. Count how much money is given:

Sol. (a)  +  +  +  +  +  +  = ₹ 35

(b)  +  +  +  +  = ₹ 13

(c)  +  +  +  = ₹ 9

(d)  +  +  +  +  = ₹ 26

(e)  +  +  +  = ₹ 36

(f)  +  +  +  = ₹ 77

Q.5. Match:

Sol.

(a)  +  +  → 

(b)  +  → 

(c)  +  +  → 

(d)  -  → 

(e)  -  → 

Creative Corner

Q. Look at the prices of the articles shown below:



Ice-cream
₹ 15



Cold drink
₹ 35



Chocolate
₹ 20



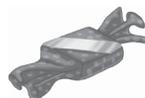
Marker pen
₹ 10



Balloon
₹ 5



Comb
₹ 10



Toffee
₹ 2



Kite
₹ 5

Q. Now, answer the following questions:

1. Pinki bought one cold drink, one marker pen and one balloon. How much money did she spend?
Sol. ₹ 35 + ₹ 10 + ₹ 5 = ₹ 50
2. Nitin bought one chocolate, one comb and one ice-cream. How much money did he spend?
Sol. ₹ 20 + ₹ 10 + ₹ 15 = ₹ 45
3. Akash bought one ice-cream, one marker pen and one kite. How much money did he spend?
Sol. ₹ 15 + ₹ 10 + ₹ 5 = ₹ 30
4. Who spent the most money?
Sol. Pinki, ₹ 50
5. Who spent the least money?
Sol. Akash, ₹ 30

14. Data Handling

Concept Recap 14.1

Q. These children are friends:

Sol. 1. Count the number of letters in each name-word.

	Names	Number of letters
(a)	S A L M A	5
(b)	J O S E P H	6
(c)	A R U N	4
(d)	C H I N T U	6

(e)	G	E	E	T	A			5
(f)	A	S	H	A				4
(g)	S	U	B	B	U			5
(h)	A	H	M	A	D			5
(i)	R	A	V	I				4

2. How many names have four letters? Three
3. How many names have five letters? Four
4. How many names have six letters? Two
5. How many times (S) comes in all the names taken together? Four
6. How many times (A) comes in all the names taken together? Nine

Pictograph

Look at the pictures given below. Here, figures of different objects are shown in tabular form. So, it is known as picture graph or pictograph.

Object	Number of objects
Football	
Pen	
Eraser	
Book	

Q. Count the number of each object in the above pictograph and fill in the blanks:

- Sol.**
1. There are six pens.
 2. There are four footballs.
 3. There are five erasers.
 4. There are seven books.
 5. Number of books are 3 more than the number of footballs.

Creative Corner

Q. Ask your friend which is his/her favourite pet. Find how many students like to keep the following animals as their pets.

Sol. Do yourself.

Mathematics, Class-2

Chapter-1 Revision

- Sol.1.** (a) 24 = Twenty-four
 (b) 81 = Eighty-one
 (c) 66 = Sixty-six
 (d) 93 = Ninety-three
 (e) 38 = Thirty-eight
 (f) 49 = Forty-nine

- Sol.2.** (a) Twenty-five 25
 (b) Thirty 30
 (c) Eighty-five 85
 (d) Ninety-nine 99
 (e) Sixty-seven 67
 (f) seventy-eight 78

- Sol.3.** (a) $\boxed{32}$ comes before 33.
 (b) 41 comes after $\boxed{40}$.
 (c) 48 comes before $\boxed{49}$.
 (d) $\boxed{87}$ comes after 86.
 (e) $\boxed{88}$ comes between 87 and 89.

- Sol.4.** (a) Forty-five is greater than thirty-nine.
 $45 > 39$
 (b) Eight-four is less than ninety-three.
 $84 < 93$
 (c) Sixty-five is greater than thirty-one.
 $65 > 31$
 (d) Seventy-eight is greater than fifty-one.
 $78 > 51$

- Sol.5.** (a) $48 > 42$ (b) $63 < 66$
 (c) $98 = 98$ (d) $73 > 69$
 (e) $85 < 97$ (f) $75 > 63$

- Sol.6.** (a) 59, 38, 48, 39, 30, 49, 30, 38, 39, 48, 49, 59
 (b) 26, 45, 67, 29, 13, 52, 67, 52, 45, 29, 26, 13

- Sol.7.**

37	18	28	89	45	71	63	21
W	H	I	S	D	A	N	C

 $\begin{array}{cccccccc} 89 & 71 & 63 & 45 & 37 & 28 & 21 & 18 \\ \hline \boxed{S} & \boxed{A} & \boxed{N} & \boxed{D} & \boxed{W} & \boxed{I} & \boxed{C} & \boxed{H} \end{array}$

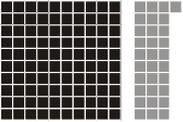
- Sol.8.** (a) $\begin{array}{r} T O \\ 42 \\ + 17 \\ \hline 59 \end{array}$ (b) $\begin{array}{r} T O \\ 25 \\ + 23 \\ \hline 48 \end{array}$
 (c) $\begin{array}{r} T O \\ 62 \\ - 32 \\ \hline 30 \end{array}$ (d) $\begin{array}{r} T O \\ 76 \\ - 45 \\ \hline 31 \end{array}$
 (e) $3 \times 7 = 21$ (f) $4 \times 8 = 32$
 (g) $5 \times 6 = 30$

- Sol.9.** (a) Third day of the week is Wednesday.
 (b) First day of the week is Monday.
 (c) June comes before July.
 (d) June comes after May.

- Sol.10.** (a)  5 o'clock (b)  8 o'clock
 (c)  3 o'clock

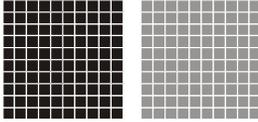
Chapter-2 Numbers Up to 1000

Concept Recap 2.1

- Sol.1.** (1) 
 One hundred thirty-one

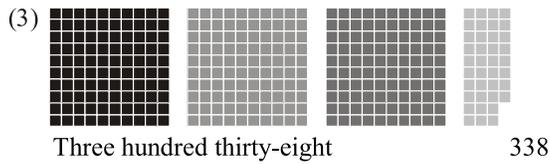
131

H	T	O
1	3	1

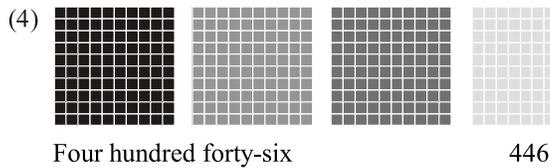
- (2) 
 Two Hundred

200

H	T	O
2	0	0



H	T	O
3	3	8



H	T	O
4	4	6

Concept Recap 2.2

- Sol.1.** (a) Four hundred seventy-eight 478
 (b) Two hundred ninety-two 292
 (c) One hundred twenty 120
 (d) Four hundred eighty-three 483

Sol.2.

- (a) 481 Four hundred eighty-one
 (b) 546 Five hundred forty-six
 (c) 378 Three hundred seventy-eight
 (d) 625 Six hundred twenty-five

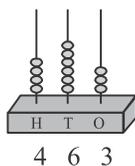
- Sol.3.** (a) $\overline{172}$ 173 (b) $\overline{404}$ 405 (c) $\overline{609}$ 610
 (d) $\overline{908}$ 909 (e) $\overline{348}$ 349 (f) $\overline{875}$ 876
 (g) $\overline{242}$ 243 (h) $\overline{389}$ 390

- Sol.4.** (a) 415 $\overline{416}$ (b) 790 $\overline{791}$ (c) 599 $\overline{600}$
 (d) 901 $\overline{902}$ (e) 474 $\overline{475}$ (f) 269 $\overline{270}$
 (g) 803 $\overline{804}$ (h) 244 $\overline{245}$

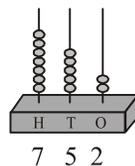
- Sol.5.** (a) 399 $\overline{400}$ 401 (b) 745 $\overline{746}$ 747
 (c) 630 $\overline{631}$ 632 (d) 833 $\overline{834}$ 835
 (e) 444 $\overline{445}$ 446 (f) 257 $\overline{258}$ 259

Concept Recap 2.3

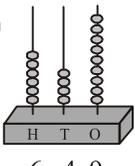
Sol.1. (a)



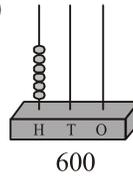
(b)



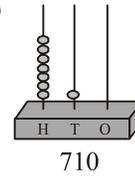
(c)



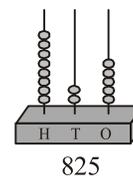
Sol.2. (a)



(b)



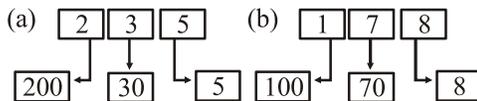
(c)



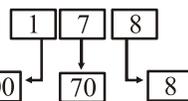
Concept Recap 2.4

Sol.1.	Number	Face Value	Place Value
(a)	573	$\overline{5}$	$\overline{500}$
(b)	573	$\overline{7}$	$\overline{70}$
(c)	573	$\overline{3}$	$\overline{3}$
(d)	689	$\overline{6}$	$\overline{600}$
(e)	689	$\overline{8}$	$\overline{80}$
(f)	689	$\overline{9}$	$\overline{9}$
(g)	413	$\overline{3}$	$\overline{3}$
(h)	413	$\overline{1}$	$\overline{10}$

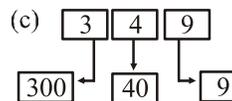
Sol.2. (a)



(b)



(c)



- Sol.3.** (a) The place value of 6 in 675 and 632 is 6 hundreds
 (b) The place value of 7 in 873 and 971 is 7 tens

- (c) The place value of 8 in 938 and 548 is 8 ones
 (d) The place value of 5 in 520 and 541 is 5 hundreds

Concept Recap 2.5

- Sol.1.** (a) $258 = 2 \text{ hundreds} + 5 \text{ tens} + 8 \text{ ones}$
 $= 200 + 50 + 8$
 (b) $325 = 3 \text{ hundreds} + 2 \text{ tens} + 5 \text{ ones}$
 $= 300 + 20 + 5$
 (c) $596 = 5 \text{ hundreds} + 9 \text{ tens} + 6 \text{ ones}$
 $= 500 + 90 + 6$
 (d) $433 = 4 \text{ hundreds} + 3 \text{ tens} + 3 \text{ ones}$
 $= 400 + 30 + 3$
 (e) $663 = 6 \text{ hundreds} + 6 \text{ tens} + 3 \text{ ones}$
 $= 600 + 60 + 3$
 (f) $820 = 8 \text{ hundreds} + 2 \text{ tens} + 0 \text{ ones}$
 $= 800 + 20 + 0$
 (g) $901 = 9 \text{ hundreds} + 0 \text{ tens} + 1 \text{ ones}$
 $= 900 + 0 + 1$
 (h) $587 = 5 \text{ hundreds} + 8 \text{ tens} + 7 \text{ ones}$
 $= 500 + 80 + 7$

- Sol.2.** (a) $6 \text{ hundreds} + 7 \text{ tens} + 3 \text{ ones} = 673$
 (b) $600 + 10 + 7 = 617$
 (c) $3 \text{ hundreds} + 6 \text{ tens} = 360$
 (d) $500 + 8 = 508$
 (e) $1 \text{ hundreds} + 9 \text{ tens} + 2 \text{ ones} = 192$
 (f) $800 + 30 = 830$

Concept Recap 2.6

- Sol.1.** (a) 450 (456) (b) 792 (983)
 (c) (259) 251 (d) (773) 573
 (e) 536 (563) (f) 219 (354)
 (g) (351) 94 (h) 38 (270)
- Sol.2.** (a) 653 (96) (b) 674 (542)
 (c) (539) 662 (d) (425) 452
 (e) 856 (84) (f) (85) 847
 (g) 254 (154) (h) (53) 661

- Sol.3.** (a) 273 723 237 (732)
 (b) 625 256 (651) 523
 (c) (431) 341 134 234
 (d) 386 (863) 638 683

- Sol.4.** (a) 541 145 154 (35)
 (b) 504 (405) 450 540
 (c) (247) 742 724 274
 (d) 391 (193) 319 913

Concept Recap 2.7

- Sol.1.** (a) 385, 721, 456, 712 = 385, 456, 712, 721
 (b) 678, 768, 876, 687 = 678, 687, 768, 876
Sol.2. (a) 234, 423, 324, 196 = 423, 324, 234, 196
 (b) 240, 360, 180, 290 = 360, 290, 240, 180

Concept Recap 2.8

- Sol.1.** (a) 4, 7, 5 = 475, 457, 547, 574, 754, 745
 (b) 3, 5, 8 = 358, 385, 538, 583, 835, 853
 (c) 9, 2, 0 = 920, 902, 290, 209
- Sol.2. Greatest Number Smallest Number**
 (a) 2, 1, 6 621 126
 (b) 8, 0, 3 830 308
 (c) 4, 7, 2 742 247

Test Prep 2.9

1. Do yourself.

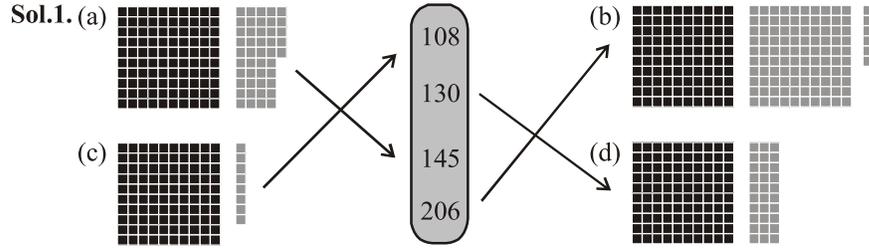
Sol.2.

	odd
	even
	even
	odd

Test Prep 2.10

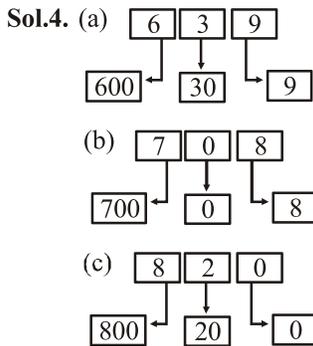
- Sol.1.** (a) Fifth 
 (b) Eighth 
- Sol.2.** 
- Sol.3.** (a) The position of L in the word SCHOOL is sixth.
 (b) The position of T in the word ELEPHANT is eighth.
 (c) The position Y in the MONDAY is 6th.

Interactive Practice



- Sol. 2.** (a) Two hundred sixteen 216
 (b) One hundred two 102
 (c) Three hundred forty-two 342
 (d) Five hundred ninety 590

- Sol. 3.** (a) 267 = Two hundred Sixty-seven
 (b) 368 = Three hundred Sixty-eight
 (c) 589 = Five hundred eighty-nine



- Sol. 5.** (a) 238

2

 (b) 490

0

 (c) 508

8

- Sol. 6.** (a) 21

<

 29 (b) 63

>

 43
 (c) 27

=

 27 (d) 96

>

 72
 (e) 45

=

 45 (f) 29

<

 45

- Sol. 7.** (a) 824, 646, 788, 642 642, 646, 788, 824
 (b) 480, 448, 484, 594 448, 480, 484, 594

- Sol. 8.** (a) 397, 524, 498, 726 726, 524, 498, 397
 (b) 641, 682, 475, 843 843, 682, 641, 475

- Sol. 9.** (a) 763 = 700 + 60 + 3
 (b) 540 = 500 + 40 + 0
 (c) 809 = 800 + 0 + 9
 (d) 978 = 900 + 70 + 8

- Sol. 10.** (a) 300 + 70 + 9 = 379 (b) 900 + 90 = 990
 (c) 400 + 6 = 406 (d) 800 + 30 + 4 = 834

- Sol. 11.** (a) 2, 4, 8, 842, 248 (b) 6, 0, 3, 603, 306
 (c) 6, 5, 9, 965, 569

- Sol. 12.** (a) 836 is greater than 863. F
 (b) Place value of 6 in 762 is 600. F
 (c) 51 ones is same as 5 tens. F
 (d) The place value and face value of 7 in 567 and 738 is same. F

Creative Corner

- Sol. 1.** • I am a three-digit number. I have 5 in my tens place. other two digits are 9 and 7. I am more than 800. I am 957 .
 • If you add 1 in me, I will become 1000. I am 999 .

Sol. 2. Do yourself

**Chapter-3
Addition**

Concept Recap 3.1

Sol. 1. (a)

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

 (b)

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

(c)

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

 (d)

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

(e)

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

 (f)

H	T	O
4	5	2
+	3	4
+	7	
7	9	9

Sol. 2. (a)

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

 (b)

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

$$\begin{array}{r} \text{(c) H T O} \\ 432 \\ + 565 \\ \hline 997 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ 451 \\ + 226 \\ \hline 677 \end{array}$$

Concept Recap 3.2

Sol.1.(a)

$$\begin{array}{r} \text{H T O} \\ 421 \\ 205 \\ + 161 \\ \hline 787 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ 501 \\ 263 \\ + 135 \\ \hline 899 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ 123 \\ 322 \\ + 340 \\ \hline 785 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ 503 \\ 241 \\ + 54 \\ \hline 798 \end{array}$$

$$\begin{array}{r} \text{(i) H T O} \\ 314 \\ 231 \\ + 142 \\ \hline 687 \end{array}$$

Concept Recap 3.3

Sol.1.(a)

$$\begin{array}{r} \text{T O} \\ \boxed{1} \\ 46 \\ + 37 \\ \hline 83 \end{array}$$

$$\begin{array}{r} \text{(c) T O} \\ \boxed{1} \\ 67 \\ + 25 \\ \hline 92 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ 250 \\ + 735 \\ \hline 985 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ 430 \\ + 545 \\ \hline 975 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ 224 \\ 434 \\ + 300 \\ \hline 958 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ 729 \\ 100 \\ + 150 \\ \hline 979 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ 542 \\ 101 \\ + 245 \\ \hline 888 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ 195 \\ 103 \\ + 201 \\ \hline 499 \end{array}$$

$$\begin{array}{r} \text{(b) T O} \\ \boxed{1} \\ 39 \\ + 58 \\ \hline 97 \end{array}$$

$$\begin{array}{r} \text{(d) T O} \\ \boxed{1} \\ 48 \\ + 47 \\ \hline 95 \end{array}$$

$$\begin{array}{r} \text{(e) T O} \\ \boxed{1} \\ 36 \\ + 54 \\ \hline 90 \end{array}$$

$$\begin{array}{r} \text{(g) T O} \\ \boxed{1} \\ 59 \\ + 39 \\ \hline 98 \end{array}$$

Sol.2.(a)

$$\begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 43 \\ + 77 \\ \hline 120 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \boxed{1} \boxed{1} \\ 98 \\ + 54 \\ \hline 152 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \boxed{1} \boxed{1} \\ 76 \\ + 97 \\ \hline 173 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ \boxed{1} \boxed{1} \\ 99 \\ + 42 \\ \hline 141 \end{array}$$

Concept Recap 3.4

Sol.1.(a)

$$\begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 675 \\ + 148 \\ \hline 823 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \boxed{1} \boxed{1} \\ 372 \\ + 469 \\ \hline 841 \end{array}$$

$$\begin{array}{r} \text{(f) T O} \\ \boxed{1} \\ 29 \\ + 68 \\ \hline 97 \end{array}$$

$$\begin{array}{r} \text{(h) T O} \\ \boxed{1} \\ 63 \\ + 29 \\ \hline 92 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \boxed{1} \boxed{1} \\ 57 \\ + 84 \\ \hline 141 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \boxed{1} \boxed{1} \\ 69 \\ + 57 \\ \hline 126 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \boxed{1} \boxed{1} \\ 33 \\ + 89 \\ \hline 122 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ \boxed{1} \\ 86 \\ + 62 \\ \hline 148 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \boxed{1} \boxed{1} \\ 736 \\ + 167 \\ \hline 903 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \boxed{1} \boxed{1} \\ 639 \\ + 278 \\ \hline 917 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \quad \boxed{1} \\ 8 \ 2 \ 6 \\ + 1 \ 6 \ 9 \\ \hline 9 \ 9 \ 5 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 6 \ 8 \ 5 \\ + 1 \ 8 \ 9 \\ \hline 8 \ 7 \ 4 \end{array}$$

Sol.2.(a)

$$\begin{array}{r} \text{H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 3 \ 9 \ 5 \\ + 4 \ 5 \ 9 \\ \hline 8 \ 5 \ 4 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 4 \ 5 \ 7 \\ + 3 \ 6 \ 9 \\ \hline 8 \ 2 \ 6 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 3 \ 9 \ 7 \\ + 4 \ 9 \ 4 \\ \hline 8 \ 9 \ 1 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ \quad \boxed{1} \\ 4 \ 8 \ 9 \\ + 2 \ 0 \ 3 \\ \hline 6 \ 9 \ 2 \end{array}$$

Concept Recap 3.5

Sol.1.(a)

$$\begin{array}{r} \text{H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 5 \ 4 \ 5 \\ 2 \ 2 \ 6 \\ + 1 \ 9 \ 2 \\ \hline 9 \ 6 \ 3 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \quad \boxed{1} \ \boxed{2} \\ 6 \ 2 \ 9 \\ 1 \ 2 \ 4 \\ + \quad 9 \ 8 \\ \hline 8 \ 5 \ 1 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 5 \ 8 \ 4 \\ + 3 \ 9 \ 6 \\ \hline 9 \ 8 \ 0 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 2 \ 1 \ 9 \\ + 6 \ 8 \ 4 \\ \hline 9 \ 0 \ 3 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 7 \ 6 \ 5 \\ + 1 \ 3 \ 5 \\ \hline 9 \ 0 \ 0 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 3 \ 7 \ 6 \\ + 2 \ 9 \ 7 \\ \hline 6 \ 7 \ 3 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \quad \boxed{1} \\ 5 \ 4 \ 6 \\ + 2 \ 4 \ 8 \\ \hline 7 \ 9 \ 4 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 4 \ 9 \ 5 \\ + 2 \ 4 \ 9 \\ \hline 7 \ 4 \ 4 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 4 \ 3 \ 6 \\ 1 \ 4 \ 6 \\ + 1 \ 9 \ 2 \\ \hline 7 \ 7 \ 4 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \quad \square \ \boxed{1} \\ 3 \ 2 \ 6 \\ 2 \ 5 \ 2 \\ + 4 \ 1 \ 4 \\ \hline 9 \ 9 \ 2 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 5 \ 5 \ 5 \\ \quad 5 \ 5 \\ + \quad \quad 5 \\ \hline 6 \ 1 \ 5 \end{array}$$

Sol.2.(a)

$$\begin{array}{r} \text{H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 3 \ 4 \ 7 \\ 1 \ 5 \ 4 \\ + 4 \ 3 \ 6 \\ \hline 9 \ 3 \ 7 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 4 \ 1 \ 7 \\ 1 \ 8 \ 5 \\ + 3 \ 7 \ 6 \\ \hline 9 \ 7 \ 8 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 8 \ 6 \ 3 \\ \quad 3 \ 9 \\ + \quad 9 \ 7 \\ \hline 9 \ 9 \ 9 \end{array}$$

Interactive Practice

Sol.1. (a)

$$\begin{array}{r} \text{H T O} \\ 2 \ 5 \ 7 \\ + 1 \ 4 \ 1 \\ \hline 3 \ 9 \ 8 \end{array}$$

$$\begin{array}{r} \text{H T O} \\ 2 \ 7 \ 6 \\ + 8 \ 1 \ 3 \\ \hline 1 \ 0 \ 8 \ 9 \end{array}$$

Sol.2. (a)

$$\begin{array}{r} \text{H T O} \\ 3 \ 0 \ 3 \\ + 2 \ 4 \ 5 \\ \hline 5 \ 4 \ 8 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ 3 \ 3 \ 1 \\ + 5 \ 5 \ 5 \\ \hline 8 \ 8 \ 6 \end{array}$$

Sol.3. (a)

$$\begin{array}{r} \text{H T O} \\ 4 \ 2 \ 2 \\ 1 \ 0 \ 3 \\ + 3 \ 6 \ 1 \\ \hline 8 \ 8 \ 6 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 3 \ 2 \ 5 \\ 1 \ 7 \ 5 \\ + 3 \ 9 \ 2 \\ \hline 8 \ 9 \ 2 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \quad \boxed{1} \ \boxed{1} \ 0 \\ 5 \ 3 \ 7 \\ 1 \ 7 \ 5 \\ + 1 \ 8 \ 7 \\ \hline 8 \ 9 \ 9 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \quad \boxed{2} \ \boxed{2} \\ 5 \ 7 \ 8 \\ 1 \ 4 \ 5 \\ + 2 \ 7 \ 7 \\ \hline 10 \ 0 \ 0 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \quad \boxed{1} \ \boxed{1} \\ 5 \ 7 \ 1 \\ 1 \ 2 \ 9 \\ + \quad 6 \ 8 \\ \hline 7 \ 6 \ 8 \end{array}$$

(b)

$$\begin{array}{r} \text{H T O} \\ 4 \ 4 \ 6 \\ + 2 \ 3 \ 3 \\ \hline 6 \ 7 \ 9 \end{array}$$

(b)

$$\begin{array}{r} \text{H T O} \\ 3 \ 3 \ 0 \\ + 4 \ 2 \ 0 \\ \hline 7 \ 5 \ 0 \end{array}$$

(b)

$$\begin{array}{r} \text{H T O} \\ 2 \ 1 \ 3 \\ 4 \ 3 \ 4 \\ + 2 \ 0 \ 0 \\ \hline 8 \ 4 \ 7 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ 102 \\ 223 \\ + 135 \\ \hline 460 \end{array}$$

$$\text{Sol.4. (a) } \begin{array}{r} \text{T O} \\ \boxed{1} \\ 46 \\ + 48 \\ \hline 94 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{T O} \\ \boxed{1} \\ 62 \\ + 35 \\ \hline 97 \end{array}$$

$$\text{Sol.5. (a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 41 \\ + 79 \\ \hline 120 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 68 \\ + 52 \\ \hline 120 \end{array}$$

$$\text{Sol.6. (a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 676 \\ + 244 \\ \hline 920 \end{array}$$

$$\text{(a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 373 \\ + 268 \\ \hline 641 \end{array}$$

$$\text{Sol.7. (a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 295 \\ + 458 \\ \hline 753 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 757 \\ + 168 \\ \hline 925 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{T O} \\ \boxed{1} \\ 34 \\ + 68 \\ \hline 102 \end{array}$$

$$\text{(d) } \begin{array}{r} \text{T O} \\ \boxed{1} \\ 23 \\ + 47 \\ \hline 70 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 59 \\ + 82 \\ \hline 141 \end{array}$$

$$\text{(d) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 39 \\ + 54 \\ \hline 93 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 738 \\ + 263 \\ \hline 1001 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 537 \\ + 377 \\ \hline 914 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 465 \\ + 136 \\ \hline 601 \end{array}$$

$$\text{(d) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 475 \\ + 297 \\ \hline 772 \end{array}$$

$$\text{Sol.8. (a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 545 \\ 423 \\ + 112 \\ \hline 1080 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{2} \\ 628 \\ 135 \\ + 98 \\ \hline 861 \end{array}$$

$$\text{Sol.9. (a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 347 \\ 255 \\ + 236 \\ \hline 838 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 417 \\ 185 \\ + 376 \\ \hline 978 \end{array}$$

Story sum of pattern

$$\text{Sol.10. (a) } \begin{array}{r} \text{H T O} \\ \boxed{1} \\ 482 \\ + 221 \\ \hline 703 \end{array}$$

703 Students appeared in the examination.

$$\text{(b) } \begin{array}{r} \text{H T O} \\ \boxed{1} \boxed{1} \\ 436 \\ 241 \\ + 195 \\ \hline 872 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{Th H T O} \\ \boxed{1} \boxed{2} \boxed{2} \\ 537 \\ 276 \\ + 187 \\ \hline 1000 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ \boxed{1} \\ 654 \\ + 392 \\ \hline 1046 \end{array}$$

The number is 1046

Chapter-4 Subtraction

Concept Recap 4.1

$$\text{Sol.1. (a) } \begin{array}{r} \text{H T O} \\ 655 \\ - 432 \\ \hline 223 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{H T O} \\ 797 \\ - 245 \\ \hline 552 \end{array}$$

$$\text{Sol.2. (a) } \begin{array}{r} \text{H T O} \\ 954 \\ - 343 \\ \hline 611 \end{array}$$

$$\text{(c) } \begin{array}{r} \text{H T O} \\ 987 \\ - 642 \\ \hline 345 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ 864 \\ - 254 \\ \hline 610 \end{array}$$

$$\text{(d) } \begin{array}{r} \text{H T O} \\ 697 \\ - 486 \\ \hline 211 \end{array}$$

$$\text{(b) } \begin{array}{r} \text{H T O} \\ 678 \\ - 532 \\ \hline 146 \end{array}$$

$$\text{(d) } \begin{array}{r} \text{H T O} \\ 345 \\ - 223 \\ \hline 122 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ 726 \\ - 402 \\ \hline 324 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ 785 \\ - 660 \\ \hline 125 \end{array}$$

$$\text{Sol.3. (a) H T O} \quad \begin{array}{r} 609 \\ - 408 \\ \hline 201 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ 486 \\ - 173 \\ \hline 313 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ 356 \\ - 25 \\ \hline 331 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ 478 \\ - 76 \\ \hline 402 \end{array}$$

Concept Recap 4.2

$$\text{Sol.1. (a) T O} \quad \begin{array}{r} \boxed{6} \boxed{13} \\ 73 \\ - 26 \\ \hline 47 \end{array}$$

$$\begin{array}{r} \text{(c) T O} \\ \boxed{7} \boxed{16} \\ 86 \\ - 39 \\ \hline 47 \end{array}$$

$$\begin{array}{r} \text{(e) T O} \\ \boxed{2} \boxed{15} \\ 35 \\ - 16 \\ \hline 19 \end{array}$$

$$\begin{array}{r} \text{(g) T O} \\ \boxed{4} \boxed{12} \\ 52 \\ - 29 \\ \hline 23 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ 656 \\ - 434 \\ \hline 222 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ 376 \\ - 246 \\ \hline 130 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ 760 \\ - 320 \\ \hline 440 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ 687 \\ - 332 \\ \hline 355 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ 483 \\ - 72 \\ \hline 411 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ 649 \\ - 329 \\ \hline 320 \end{array}$$

$$\begin{array}{r} \text{(b) T O} \\ \boxed{5} \boxed{14} \\ 64 \\ - 45 \\ \hline 19 \end{array}$$

$$\begin{array}{r} \text{(d) T O} \\ \boxed{8} \boxed{10} \\ 90 \\ - 84 \\ \hline 06 \end{array}$$

$$\begin{array}{r} \text{(f) T O} \\ \boxed{5} \boxed{12} \\ 62 \\ - 17 \\ \hline 45 \end{array}$$

$$\begin{array}{r} \text{(h) T O} \\ \boxed{6} \boxed{13} \\ 73 \\ - 27 \\ \hline 46 \end{array}$$

$$\text{Sol.2. (a) T O} \quad \begin{array}{r} \boxed{4} \boxed{13} \\ 53 \\ - 18 \\ \hline 35 \end{array}$$

$$\begin{array}{r} \text{(c) T O} \\ \boxed{5} \boxed{15} \\ 65 \\ - 48 \\ \hline 17 \end{array}$$

$$\begin{array}{r} \text{(e) T O} \\ \boxed{7} \boxed{14} \\ 84 \\ - 46 \\ \hline 38 \end{array}$$

$$\begin{array}{r} \text{(g) T O} \\ \boxed{4} \boxed{17} \\ 57 \\ - 29 \\ \hline 28 \end{array}$$

$$\begin{array}{r} \text{(b) T O} \\ \boxed{3} \boxed{12} \\ 42 \\ - 17 \\ \hline 25 \end{array}$$

$$\begin{array}{r} \text{(d) T O} \\ \boxed{6} \boxed{12} \\ 72 \\ - 59 \\ \hline 13 \end{array}$$

$$\begin{array}{r} \text{(f) T O} \\ \boxed{8} \boxed{10} \\ 90 \\ - 68 \\ \hline 22 \end{array}$$

$$\begin{array}{r} \text{(h) T O} \\ \boxed{7} \boxed{14} \\ 84 \\ - 65 \\ \hline 19 \end{array}$$

Test Prep 4.3

$$\text{Sol.1. (a) H T O} \quad \begin{array}{r} \boxed{5} \boxed{13} \boxed{10} \\ 640 \\ - 376 \\ \hline 264 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \boxed{8} \boxed{9} \boxed{10} \\ 900 \\ - 533 \\ \hline 367 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \boxed{4} \boxed{10} \boxed{14} \\ 514 \\ - 377 \\ \hline 137 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ \boxed{} \boxed{} \boxed{} \\ 729 \\ - 428 \\ \hline 301 \end{array}$$

$$\text{Sol.2. (a) H T O} \quad \begin{array}{r} \boxed{8} \boxed{9} \boxed{12} \\ 902 \\ - 767 \\ \hline 135 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \boxed{5} \boxed{11} \boxed{15} \\ 625 \\ - 496 \\ \hline 129 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \boxed{7} \boxed{10} \boxed{12} \\ 812 \\ - 654 \\ \hline 158 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \boxed{5} \boxed{11} \boxed{10} \\ 620 \\ - 488 \\ \hline 132 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ \boxed{7} \boxed{11} \boxed{10} \\ 820 \\ - 654 \\ \hline 166 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ \boxed{6} \boxed{9} \boxed{14} \\ 704 \\ - 598 \\ \hline 106 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ \boxed{7} \ \boxed{9} \ \boxed{11} \\ 8 \ 0 \ 1 \\ - 4 \ 4 \ 2 \\ \hline 3 \ 5 \ 9 \end{array}$$

$$\begin{array}{r} \text{(e) H T O} \\ \boxed{3} \ \boxed{9} \ \boxed{13} \\ 4 \ 0 \ 3 \\ - 2 \ 8 \ 5 \\ \hline 1 \ 1 \ 8 \end{array}$$

$$\begin{array}{r} \text{(g) H T O} \\ \boxed{5} \ \boxed{9} \ \boxed{10} \\ 6 \ 0 \ 0 \\ - 5 \ 6 \ 4 \\ \hline 3 \ 6 \end{array}$$

$$\begin{array}{r} \text{(d) H T O} \\ \boxed{5} \ \boxed{9} \ \boxed{17} \\ 6 \ 0 \ 7 \\ - 4 \ 9 \ 9 \\ \hline 1 \ 0 \ 8 \end{array}$$

$$\begin{array}{r} \text{(f) H T O} \\ \boxed{8} \ \boxed{9} \ \boxed{10} \\ 9 \ 0 \ 0 \\ - 3 \ 5 \ 2 \\ \hline 5 \ 4 \ 8 \end{array}$$

$$\begin{array}{r} \text{(h) H T O} \\ \boxed{6} \ \boxed{13} \ \boxed{10} \\ 7 \ 4 \ 0 \\ - 4 \ 8 \ 8 \\ \hline 2 \ 5 \ 2 \end{array}$$

Story sums on subtraction

Sol.1. 68 apples were rotton.

$$\begin{array}{r} \text{H T O} \\ \boxed{2} \ \boxed{11} \ \boxed{14} \\ 3 \ 2 \ 4 \\ - 2 \ 5 \ 6 \\ \hline 0 \ 6 \ 8 \end{array}$$

Sol.2. 69 boys

$$\begin{array}{r} \text{H T O} \\ 1 \ 5 \ 5 \\ - 8 \ 6 \\ \hline 6 \ 9 \end{array}$$

Sol.3. 32 balloons were left.

$$\begin{array}{r} \text{H T O} \\ 1 \ 2 \ 8 \\ - 9 \ 6 \\ \hline 3 \ 2 \end{array}$$

Sol.4. 192 students

$$\begin{array}{r} \text{H T O} \\ 7 \ 9 \ 0 \\ - 5 \ 9 \ 8 \\ \hline 1 \ 9 \ 2 \end{array}$$

Sol.5. 639 passengers are left.

$$\begin{array}{r} \text{H T O} \\ 9 \ 5 \ 8 \\ - 3 \ 1 \ 9 \\ \hline 6 \ 3 \ 9 \end{array}$$

Sol.6. 418 hens are left in the farm.

$$\begin{array}{r} \text{H T O} \\ 6 \ 1 \ 5 \\ - 1 \ 9 \ 7 \\ \hline 4 \ 1 \ 8 \end{array}$$

Interactive practice

- Sol. 1.** (a) 452 492
 (b) 306 206
 (c) 519 519
 (d) 436 416
 (e) 599 691

Sol.2. (a)
$$\begin{array}{r} \text{H T O} \\ 5 \ 4 \ 2 \\ - 3 \ 8 \ 2 \\ \hline 1 \ 6 \ 0 \end{array}$$
 (b)
$$\begin{array}{r} \text{H T O} \\ 7 \ 9 \ 1 \\ - 7 \ 1 \ 9 \\ \hline 7 \ 2 \end{array}$$

Sol.3. (a)
$$\begin{array}{r} \text{H T O} \\ 6 \ 5 \ 3 \\ - 4 \ 3 \ 2 \\ \hline 2 \ 2 \ 1 \end{array}$$
 (b)
$$\begin{array}{r} \text{H T O} \\ \boxed{6} \ \boxed{11} \ \boxed{10} \\ 7 \ 2 \ 0 \\ - 3 \ 4 \ 8 \\ \hline 3 \ 7 \ 2 \end{array}$$

(c)
$$\begin{array}{r} \text{H T O} \\ \boxed{7} \ \boxed{14} \ \square \\ 8 \ 4 \ 9 \\ - 5 \ 8 \ 9 \\ \hline 2 \ 6 \ 0 \end{array}$$

Sol.4. (a)
$$\begin{array}{r} 6 \ 4 \ 1 \\ - 2 \ 1 \ 7 \\ \hline 4 \ 2 \ 4 \end{array}$$

Sol.5
$$\begin{array}{r} 3 \ 6 \ 6 \\ - 2 \ 2 \ 7 \\ \hline 1 \ 3 \ 9 \end{array}$$

424 Students passed in the examination.

The School was closed for 139 days.

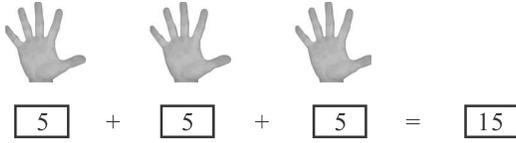
Creative Corner

- Sol. 1.** (a) 11 + 11 = 22
 (b) 12 + 21 = 33
 (c) 13 + 31 = 44
 (d) 14 + 41 = 55
 (e) 15 + 51 = 66
 (f) 16 + 61 = 77
 (g) 17 + 71 = 88
 (h) 18 + 81 = 99
 (i) 19 + 91 = 110
- Sol. 2.** (a) 18 - 11 = 7
 (b) 27 - 13 = 14
 (c) 36 - 15 = 21
 (d) 45 - 17 = 28
 (e) 54 - 19 = 35
 (f) 63 - 21 = 42
 (g) 72 - 23 = 49
 (h) 81 - 25 = 56
 (i) 90 - 27 = 63

Chapter-5 Multiplication

Concept Recap 5.1

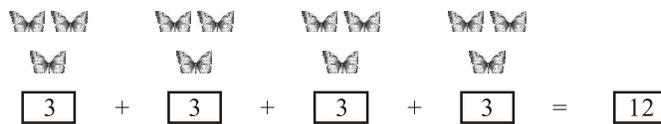
Sol.1. (a)



(b)



(c)



Sol.2. (a)



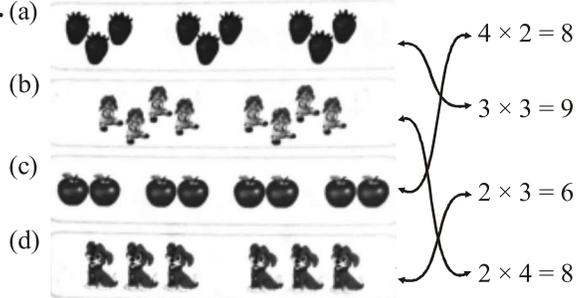
(b)



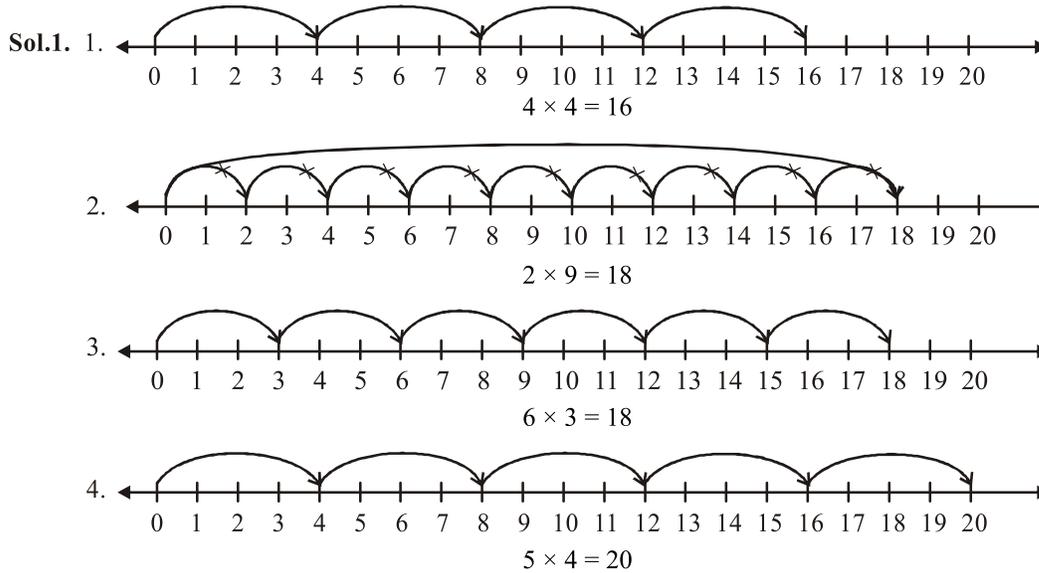
(c)



Sol.3. (a)



Concept Recap 5.2



Concept Recap 5.3

Sol. 1. (a)
$$\begin{array}{r} T \ O \\ 3 \ 3 \\ \times \ 3 \\ \hline 9 \ 9 \end{array}$$

(b)
$$\begin{array}{r} T \ O \\ 2 \ 2 \\ \times \ 3 \\ \hline 6 \ 6 \end{array}$$

(c)
$$\begin{array}{r} T \ O \\ 2 \ 2 \\ \times \ 2 \\ \hline 4 \ 4 \end{array}$$

(d)
$$\begin{array}{r} T \ O \\ 2 \ 1 \\ \times \ 4 \\ \hline 8 \ 4 \end{array}$$

(e)
$$\begin{array}{r} T \ O \\ 3 \ 1 \\ \times \ 3 \\ \hline 9 \ 3 \end{array}$$

Sol. 2. (a)
$$\begin{array}{r} T \ O \\ 1 \ 1 \\ \times \ 8 \\ \hline 8 \ 8 \end{array}$$

(b)
$$\begin{array}{r} T \ O \\ 3 \ 3 \\ \times \ 2 \\ \hline 6 \ 6 \end{array}$$

(c)
$$\begin{array}{r} T \ O \\ 1 \ 2 \\ \times \ 4 \\ \hline 4 \ 8 \end{array}$$

(d)
$$\begin{array}{r} T \ O \\ 3 \ 4 \\ \times \ 2 \\ \hline 6 \ 8 \end{array}$$

(e)
$$\begin{array}{r} T \ O \\ 4 \ 2 \\ \times \ 2 \\ \hline 8 \ 4 \end{array}$$

Concept Recap 5.4

Sol. 1. (a)
$$\begin{array}{r} H \ T \ O \\ 2 \ 2 \ 1 \\ \times \ 2 \\ \hline 4 \ 4 \ 2 \end{array}$$

(b)
$$\begin{array}{r} H \ T \ O \\ 2 \ 0 \ 4 \\ \times \ 2 \\ \hline 4 \ 0 \ 8 \end{array}$$

(c)
$$\begin{array}{r} H \ T \ O \\ 3 \ 1 \ 3 \\ \times \ 3 \\ \hline 9 \ 3 \ 9 \end{array}$$

(d)
$$\begin{array}{r} H \ T \ O \\ 2 \ 1 \ 0 \\ \times \ 4 \\ \hline 8 \ 4 \ 0 \end{array}$$

(e)
$$\begin{array}{r} H \ T \ O \\ 4 \ 0 \ 5 \\ \times \ 1 \\ \hline 4 \ 0 \ 5 \end{array}$$

(f)
$$\begin{array}{r} H \ T \ O \\ 4 \ 2 \ 0 \\ \times \ 2 \\ \hline 8 \ 4 \ 0 \end{array}$$

(g)
$$\begin{array}{r} H \ T \ O \\ 1 \ 1 \ 1 \\ \times \ 5 \\ \hline 5 \ 5 \ 5 \end{array}$$

(h)
$$\begin{array}{r} H \ T \ O \\ 1 \ 0 \ 1 \\ \times \ 8 \\ \hline 8 \ 0 \ 8 \end{array}$$

Sol. 2. (a)
$$\begin{array}{r} H \ T \ O \\ 1 \ 3 \ 2 \\ \times \ 3 \\ \hline 3 \ 9 \ 6 \end{array}$$

(b)
$$\begin{array}{r} H \ T \ O \\ 1 \ 1 \ 2 \\ \times \ 4 \\ \hline 4 \ 4 \ 8 \end{array}$$

(c)
$$\begin{array}{r} H \ T \ O \\ 3 \ 2 \ 5 \\ \times \ 3 \\ \hline 9 \ 7 \ 5 \end{array}$$

(d)
$$\begin{array}{r} H \ T \ O \\ 1 \ 0 \ 0 \\ \times \ 9 \\ \hline 9 \ 0 \ 0 \end{array}$$

Concept Recap 5.5

Sol. 1. (a) T O

$$\begin{array}{r} \boxed{3} \\ 16 \\ \times 6 \\ \hline 96 \end{array}$$

(c) T O

$$\begin{array}{r} \boxed{1} \\ 16 \\ \times 3 \\ \hline 48 \end{array}$$

(e) T O

$$\begin{array}{r} \boxed{1} \\ 13 \\ \times 4 \\ \hline 52 \end{array}$$

(g) T O

$$\begin{array}{r} \boxed{2} \\ 19 \\ \times 3 \\ \hline 57 \end{array}$$

Sol. 2. (a) H T O

$$\begin{array}{r} \boxed{1} \\ 75 \\ \times 3 \\ \hline 225 \end{array}$$

(c) H T O

$$\begin{array}{r} \boxed{1} \\ 92 \\ \times 7 \\ \hline 644 \end{array}$$

(e) H T O

$$\begin{array}{r} \boxed{7} \\ 78 \\ \times 9 \\ \hline 702 \end{array}$$

(g) H T O

$$\begin{array}{r} \boxed{6} \\ 37 \\ \times 9 \\ \hline 333 \end{array}$$

(b) T O

$$\begin{array}{r} \boxed{1} \\ 23 \\ \times 4 \\ \hline 92 \end{array}$$

(d) T O

$$\begin{array}{r} \boxed{1} \\ 24 \\ \times 3 \\ \hline 72 \end{array}$$

(f) T O

$$\begin{array}{r} \boxed{3} \\ 16 \\ \times 5 \\ \hline 80 \end{array}$$

(h) T O

$$\begin{array}{r} \boxed{1} \\ 14 \\ \times 4 \\ \hline 56 \end{array}$$

(b) H T O

$$\begin{array}{r} \boxed{1} \\ 84 \\ \times 3 \\ \hline 252 \end{array}$$

(d) H T O

$$\begin{array}{r} \boxed{5} \\ 87 \\ \times 8 \\ \hline 696 \end{array}$$

(f) H T O

$$\begin{array}{r} \boxed{5} \\ 59 \\ \times 6 \\ \hline 354 \end{array}$$

(h) H T O

$$\begin{array}{r} \boxed{5} \\ 46 \\ \times 9 \\ \hline 414 \end{array}$$

Story Sums on Multiplication

Sol. 1. There are 112 students.

$$\begin{array}{r} \text{H T O} \\ \boxed{3} \\ 28 \\ \times 4 \\ \hline 112 \end{array}$$

Sol. 2. There are 441 books.

$$\begin{array}{r} \text{H T O} \\ \boxed{8} \\ 49 \\ \times 9 \\ \hline 441 \end{array}$$

Sol. 3. 108 players participated in the contest.

$$\begin{array}{r} \text{H T O} \\ \boxed{1} \\ 12 \\ \times 9 \\ \hline 108 \end{array}$$

Sol. 4. There are 160 balls.

$$\begin{array}{r} \text{H T O} \\ \boxed{1} \\ 32 \\ \times 5 \\ \hline 160 \end{array}$$

Sol. 5. There are 582 apples.

$$\begin{array}{r} \text{H T O} \\ \boxed{4} \\ 97 \\ \times 6 \\ \hline 582 \end{array}$$

Interactive Practice

Sol. 1. (a) 0, (b) 0, (c) 0, (d) 8, (e) 7, (f) 10

Sol. 2. (a)  = 2 × 4 = 8

(b)  = 4 × 3 = 12

Sol. 3. (a) 5 × 6 = $\boxed{30}$ (b) 8 × 7 = $\boxed{56}$

(c) 9 × 8 = $\boxed{72}$ (d) 10 × 7 = $\boxed{70}$

(e) 6 × 8 = $\boxed{48}$ (f) 9 × 9 = $\boxed{81}$

Sol. 4. (a) 9 × $\boxed{6}$ = 54 (b) $\boxed{8}$ × 6 = 48

Chapter-6 Division

(c) $8 \times 3 = \boxed{24}$ (d) $\boxed{8} \times 10 = 80$

(e) $10 \times 9 = \boxed{90}$ (f) $6 \times \boxed{10} = 60$

Sol. 5. (a)
$$\begin{array}{r} 68 \\ \times 4 \\ \hline 272 \end{array}$$
 (b)
$$\begin{array}{r} 92 \\ \times 7 \\ \hline 644 \end{array}$$

(c)
$$\begin{array}{r} 58 \\ \times 8 \\ \hline 464 \end{array}$$
 (d)
$$\begin{array}{r} 78 \\ \times 9 \\ \hline 702 \end{array}$$

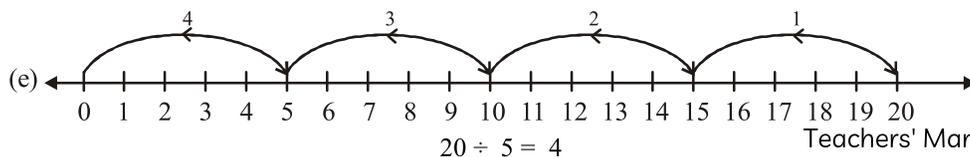
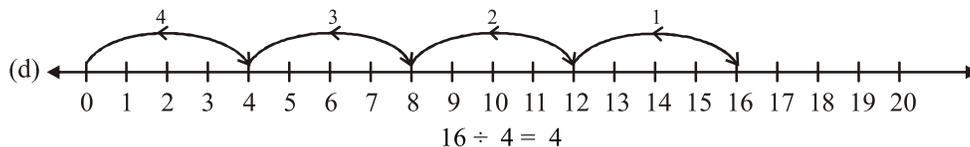
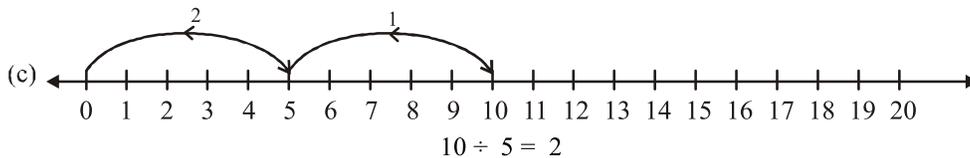
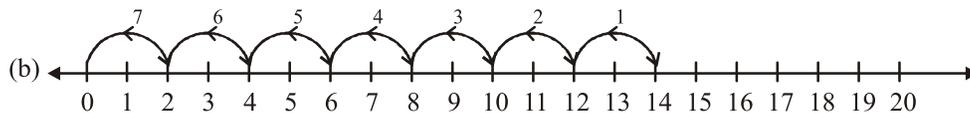
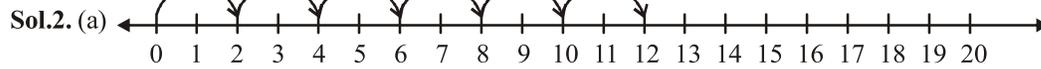
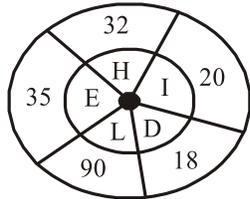
Sol. 6. $18 \times 6 = \boxed{108}$ Answer : 108 balls in all.

Sol. 7. $35 \times 9 = \boxed{315}$ Answer : 315 chairs in all.

Creative Corner.

$\boxed{3 \times 6}$ $\boxed{7 \times 5}$ $\boxed{9 \times 10}$ $\boxed{8 \times 4}$ $\boxed{5 \times 4}$

$\frac{18}{D}$ $\frac{35}{E}$ $\frac{90}{L}$ $\frac{32}{H}$ $\frac{20}{I}$



Concept Recap 6.1

Sol. 1. Each group contains $\boxed{4}$ balloons. Division fact is $12 \div 3 = \boxed{4}$

Sol. 2. Each group contains $\boxed{3}$ Pencils. Division fact is $12 \div 4 = \boxed{3}$

Sol. 3. Each group contains $\boxed{4}$ Candles. Division fact is $16 \div 4 = \boxed{4}$

Sol. 4. (a) 10 mangoes to be put in group of 5 each.
 $10 - 5 = 5; 5 - 5 = 0$
 $10 \div 5 = 2$
 So, there would be 2 groups.
 (b) 6 balls to be put in pairs of 2 each.
 $6 - 2 = 4; 4 - 2 = 2; 2 - 2 = 0$
 $6 \div 2 = 3$

- (c) 10 shells to be put in groups of 2 each.
 $10 - 2 = 8$; $8 - 2 = 6$; $6 - 2 = 4$; $4 - 2 = 2$;
 $2 - 2 = 0$
 $10 \div 2 = 5$
- (d) 12 books to be put in groups of 3 each.
 $12 - 3 = 9$; $9 - 3 = 6$; $6 - 3 = 3$; $3 - 3 = 0$
 $12 \div 3 = 4$

Concept Recap 6.2

- Sol. 1.** (a) $30 \div 6 = 30 - 6 = 24$; $24 - 6 = 18$; $18 - 6 = 12$; $12 - 6 = 6$; $6 - 6 = 0 = \boxed{5}$
- (b) $24 \div 8 = 24 - 8 = 16$; $16 - 8 = 8$; $8 - 8 = 0 = \boxed{3}$
- (c) $35 \div 7 = 35 - 7 = 28$; $28 - 7 = 21$; $21 - 7 = 14$;
 $14 - 7 = 7$; $7 - 7 = 0 = \boxed{5}$
- (d) $63 \div 9 = 63 - 9 = 54$; $54 - 9 = 45$; $45 - 9 = 36$;
 $36 - 9 = 27$; $27 - 9 = 18$; $18 - 9 = 9$; $9 - 9 = 0 = \boxed{7}$

Concept Recap 6.3

- Sol. 1.** (a) $7 \times 2 = \boxed{14} \longrightarrow 14 \div 2 = \boxed{7}$ and $14 \div 7 = \boxed{2}$
- (b) $12 \times 2 = \boxed{24} \longrightarrow 24 \div 2 = 12$ and $24 \div 12 = 2$
- (c) $5 \times 8 = \boxed{40} \longrightarrow 40 \div 8 = 5$ and $40 \div 5 = 8$
- (d) $7 \times 9 = \boxed{63} \longrightarrow 63 \div 9 = 7$ and $63 \div 7 = 9$

- Sol. 2.** (a) $12 \div 12 = \boxed{1}$ (b) $15 \div 1 = \boxed{15}$
- (c) $28 \div 1 = \boxed{28}$ (d) $0 \div 8 = \boxed{0}$
- (e) $20 \div 20 = \boxed{1}$ (f) $0 \div 6 = \boxed{0}$
- (g) $90 \div 90 = \boxed{1}$ (h) $37 \div 1 = \boxed{37}$
- (i) $25 \div 25 = \boxed{1}$

Concept Recap 6.4

- Sol. 1.** (a) $16 \div 2 = 8$ (b) $24 \div 3 = 8$
- (c) $36 \div 4 = 9$ (d) $45 \div 5 = 9$
- (e) $63 \div 7 = 9$ (f) $64 \div 8 = 8$
- (g) $27 \div 9 = 3$ (h) $56 \div 8 = 7$
- (i) $49 \div 7 = 7$ (j) $42 \div 6 = 7$
- (k) $81 \div 9 = 9$ (l) $63 \div 9 = 7$
- (m) $80 \div 10 = 8$ (n) $48 \div 6 = 8$
- (o) $35 \div 5 = 7$

- Sol. 2.** (a)
$$\begin{array}{r} 7 \\ 6 \overline{)45} \\ \underline{-42} \\ 3 \end{array}$$
 (b)
$$\begin{array}{r} 5 \\ 5 \overline{)27} \\ \underline{-25} \\ 2 \end{array}$$
- Q = 7, R = 3 Q = 5, R = 2

$$(c) \begin{array}{r} 8 \\ 9 \overline{)80} \\ \underline{-72} \\ 8 \end{array}$$

Q = 8, R = 8

$$(e) \begin{array}{r} 9 \\ 3 \overline{)28} \\ \underline{-27} \\ 1 \end{array}$$

Q = 9, R = 1

$$(g) \begin{array}{r} 9 \\ 8 \overline{)77} \\ \underline{-72} \\ 5 \end{array}$$

Q = 9, R = 5

$$(i) \begin{array}{r} 9 \\ 7 \overline{)65} \\ \underline{-63} \\ 2 \end{array}$$

Q = 9, R = 2

$$(k) \begin{array}{r} 8 \\ 9 \overline{)79} \\ \underline{-72} \\ 7 \end{array}$$

Q = 8, R = 7

$$(d) \begin{array}{r} 9 \\ 8 \overline{)74} \\ \underline{-72} \\ 2 \end{array}$$

Q = 9, R = 2

$$(f) \begin{array}{r} 5 \\ 8 \overline{)45} \\ \underline{-40} \\ 5 \end{array}$$

Q = 5, R = 5

$$(h) \begin{array}{r} 8 \\ 7 \overline{)57} \\ \underline{-56} \\ 1 \end{array}$$

Q = 8, R = 1

$$(j) \begin{array}{r} 8 \\ 6 \overline{)49} \\ \underline{-48} \\ 1 \end{array}$$

Q = 8, R = 1

$$(l) \begin{array}{r} 7 \\ 8 \overline{)61} \\ \underline{-56} \\ 5 \end{array}$$

Q = 8, R = 5

Concept Recap 6.5

$$\text{Sol. 1. (a)} \begin{array}{r} 134 \\ 2 \overline{)268} \\ \underline{-2} \\ 6 \end{array}$$

$$\begin{array}{r} -6 \\ 8 \\ \underline{-8} \\ 0 \end{array}$$

Q = 134, R = 0

$$(c) \begin{array}{r} 321 \\ 3 \overline{)963} \\ \underline{-9} \\ 6 \end{array}$$

$$\begin{array}{r} -6 \\ 3 \\ \underline{-3} \\ 0 \end{array}$$

Q = 321, R = 0

$$(b) \begin{array}{r} 212 \\ 4 \overline{)848} \\ \underline{-8} \\ 4 \end{array}$$

$$\begin{array}{r} -4 \\ 8 \\ \underline{-8} \\ 0 \end{array}$$

Q = 212, R = 0

$$(d) \begin{array}{r} 432 \\ 2 \overline{)864} \\ \underline{-8} \\ 6 \end{array}$$

$$\begin{array}{r} -6 \\ 4 \\ \underline{-4} \\ 0 \end{array}$$

Q = 432, R = 0

$$\begin{array}{r} 45 \\ 6 \overline{)271} \\ \underline{-24} \\ 31 \\ \underline{-30} \\ 1 \end{array}$$

Q = 45, R = 1

$$\begin{array}{r} 61 \\ 8 \overline{)492} \\ \underline{-48} \\ 12 \\ \underline{-8} \\ 4 \end{array}$$

Q = 61, R = 4

$$\begin{array}{r} 69 \\ 4 \overline{)278} \\ \underline{-24} \\ 38 \\ \underline{-36} \\ 2 \end{array}$$

Q = 69, R = 2

$$\begin{array}{r} 97 \\ 7 \overline{)679} \\ \underline{-63} \\ 49 \\ \underline{-49} \\ 0 \end{array}$$

Q = 97, R = 0

Story Sums on Division

Sol. 1. The Shopkeeper put 5 sweets in each plate.

$$\begin{array}{r} 5 \\ 8 \overline{)40} \\ \underline{-40} \\ 0 \end{array}$$

Sol. 2. Each child will get 9 pencils.

$$\begin{array}{r} 9 \\ 9 \overline{)81} \\ \underline{-81} \\ 0 \end{array}$$

Sol. 3. 9 Cars will be needed.

$$\begin{array}{r} 9 \\ 4 \overline{)36} \\ \underline{-36} \\ 0 \end{array}$$

Sol. 4. There are 8 bananas in each bunch.

$$\begin{array}{r} 8 \\ 5 \overline{)40} \\ \underline{-40} \\ 0 \end{array}$$

Sol. 5. There are 30 weeks.

$$\begin{array}{r} 30 \\ 7 \overline{)210} \\ \underline{-21} \\ 0 \\ \underline{0} \\ 0 \end{array}$$

Sol. 6. 54 vans are required.

$$\begin{array}{r} 54 \\ 9 \overline{)486} \\ \underline{-45} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

Interactive Practice

Sol. 1. (a) $15 \div 3 = 5$ (b) $18 \div 2 = 9$

Sol. 2. (a) $4 \times 5 = 20$; $20 \div 4 = \boxed{5}$ and $20 \div 5 = \boxed{4}$

(b) $7 \times 6 = 42$; $42 \div 7 = \boxed{6}$ and $42 \div 6 = \boxed{7}$

Sol. 3. (a) $63 \div 7 = 9$ (b) $32 \div 8 = 4$

(c) $49 \div 7 = 7$ (d) $56 \div 8 = 7$

(e) $81 \div 9 = 9$ (f) $42 \div 6 = 7$

$$\begin{array}{r} 12 \\ 7 \overline{)86} \\ \underline{-7} \\ 16 \\ \underline{-14} \\ 2 \end{array}$$

Q = 12, R = 2

$$\begin{array}{r} 13 \\ 5 \overline{)66} \\ \underline{-5} \\ 16 \\ \underline{-15} \\ 1 \end{array}$$

Q = 13, R = 1

$$\begin{array}{r} 111 \\ 6 \overline{)667} \\ \underline{-6} \\ 6 \\ \underline{-6} \\ 7 \\ \underline{-6} \\ 1 \end{array}$$

Q = 111, R = 1

$$\begin{array}{r} 61 \\ 4 \overline{)246} \\ \underline{-24} \\ 6 \\ \underline{-4} \\ 2 \end{array}$$

Q = 61, R = 2

Sol. 5. There are 18 rows.

$$\begin{array}{r} 18 \\ 8 \overline{)144} \\ \underline{-8} \\ 64 \\ \underline{-64} \\ 0 \end{array}$$

Creative Corner

Sol. 1. (1) 8, 6, 48, 60 (2) 2, 3, 18, 54

$48 \div 6 = 8$ $54 \div 18 = 3$

(3) 7, 9, 63, 72 (4) 7, 6, 8, 42

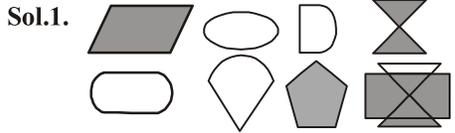
$63 \div 9 = 7$ $42 \div 6 = 7$

(5) 48, 4, 12, 80 (6) 2, 18, 21, 42

$48 \div 4 = 12$ $42 \div 2 = 21$

Chapter-7 Geometry

Concept Recap 7.1



- Sol. 2. (a) A Circle has 0 corner.
 (b) A rectangle has 4 sides.
 (c) All the sides of a Square are equal.
 (d) A triangle has 3 sides.
 (e) Opposite sides of a rectangle are equal.
- Sol. 3. (a) Horizontal lines 1 Slanting lines 2
 Vertical lines 0 Curved lines 0
 (b) Horizontal lines 2 Slanting lines 1
 Vertical lines 2 Curved lines 0
 (c) Horizontal lines 0 Slanting lines 0
 Vertical lines 0 Curved lines 1
 (d) Horizontal lines 0 Slanting lines 2
 Vertical lines 0 Curved lines 0

Concept Recap 7.2

- Sol. 1. (a) match-box brick
 (b) Cricket ball football
 (c) tube-light pepsi-can
 (d) ice-cube dice
- Sol. 2. Do yourself
- Sol. 3. (a) Straight edges = 12, Vertices = 8
 (b) Curved edges = 0, Vertices = 0
 (c) Straight edges = 12, Vertices = 8
 (d) Straight edges = 8, Vertices = 8
- Sol. 4. (a) A sphere has 0 Corner.
 (b) A dice is an example of Cube.
 (c) A cylinder has 2 flat faces.
 (d) A cuboid has 12 edges.

Concept Recap 7.3

Sol. 1. Do yourself.

Sol. 2.	Rolling object	Sliding object
	Pencil	eraser
	Orange	brick
	bangle	book
	Candle, football	match box
	Coin, pen	

Interactive Practice

1. Square, 2. Cube (or) Cuboid, 3. 8 corners,
 4. No corner, 5. Cylinder

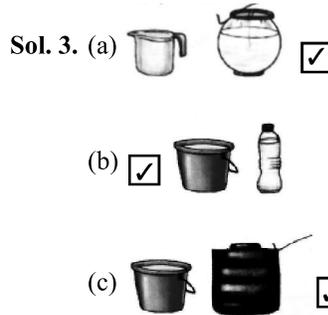
Creative Corner

Do yourself.

Chapter-8 Measurement

Concept Recap 8.1

- Sol. 1. (a) (i) fingers (b) (ii) hand span
 (c) (iii) pace
- Sol. 2. (a) Book is heavier than the calculator.
 (b) Calculator is lighter than the book.
 (c) Mangoes are heavier than the football.
 (d) Football is lighter than the mangoes.



Concept Recap 8.2

- Sol. 1. (a) 4 (b) 8
 (c) 4 (d) 5
- Sol. 2. (a) 200 cm = 2 m (b) 500 cm = 5 m
 (c) 600 cm = 6 m (d) 900 cm = 9 m
 (e) 300 cm = 3 m (f) 1200 cm = 12 m
- Sol. 3. (a) 4 m = 400 cm (b) 6 m = 600 cm
 (c) 8 m = 800 cm (d) 10 m = 1000 cm
 (e) 11 m = 1100 cm (f) 15 m = 1500 cm
- Sol. 4. Do yourself.

Concept Recap 8.3

- Sol. 1. (a)
$$\begin{array}{r} 84\text{ m} \\ + 66\text{ m} \\ \hline 150\text{ m} \end{array}$$
 (b)
$$\begin{array}{r} 346\text{ m} \\ + 354\text{ m} \\ \hline 700\text{ m} \end{array}$$
- (c)
$$\begin{array}{r} 85\text{ m} \\ - 26\text{ m} \\ \hline 59\text{ m} \end{array}$$
 (d)
$$\begin{array}{r} 420\text{ m} \\ - 189\text{ m} \\ \hline 231\text{ m} \end{array}$$

(e) m cm	(f) m cm
4 3 3 8	2 3 7 4 4
+ 2 9 5 9	+ 6 8 4 8
<u>7 2 9 7</u>	<u>3 0 5 9 2</u>
(g) m cm	(h) m cm
3 4 8 5 4	5 6 3 5 3
4 7 2 1	3 8 2 9
+ 4 6 7 1 8	+ 6 8
<u>8 6 2 9 3</u>	<u>6 0 7 9 0</u>

Sol. 2. She bought 91 cm of ribbon.

$$\begin{array}{r} 28 \text{ cm} \\ 39 \text{ cm} \\ + 24 \text{ cm} \\ \hline 91 \text{ cm} \end{array}$$

Sol. 3. 21 m 24 cm of cloth was left.

$$\begin{array}{r} 49 \text{ m } 60 \text{ cm} \\ - 28 \text{ m } 35 \text{ cm} \\ \hline 21 \text{ m } 25 \text{ cm} \end{array}$$

Concept Recap 8.4

Sol. 1. (a) 3 kg = 3000 g (b) 8 kg = 8000 g
(c) 6000 g = 6 kg (d) 9000 g = 9 kg

Sol. 2. (a) 500 g (c) 1 kg

Sol. 3. (a) 80 g (b) 40 g

Concept Recap 8.5

Sol. 1. (a)	6 7 kg	(b)	1 4 6 kg
	+ 2 9 kg		+ 7 8 9 kg
	<u>9 6 kg</u>		<u>9 3 5 kg</u>
(c)	7 2 kg	(d)	3 0 2 kg
	- 3 9 kg		- 6 5 kg
	<u>3 3 kg</u>		<u>2 3 7 kg</u>
(e)	kg g	(f)	kg g
	8 3 0 0		9 0 2 2 5
	- 4 1 2 5		- 7 9 2 8 7
	<u>4 1 7 5</u>		<u>1 0 9 3 8</u>
(g)	kg g	(h)	kg g
	4 2 5 4 6 0		1 0 4 3 1 5
	- 6 8 2 7 6		- 6 5 1 7 6
	<u>3 5 7 1 8 4</u>		<u>3 9 1 3 9</u>
(i)	kg g		
	7 0 6 5 0		
	- 8 0 8 0		
	<u>6 2 5 7 0</u>		

Sol. 2. 30 kg 262 g flour was left.

$$\begin{array}{r} \text{kg} \quad \text{g} \\ 30 \text{ kg } 262 \text{ g} \\ - 48 \text{ kg } 538 \text{ g} \\ \hline 30 \text{ kg } 262 \text{ g} \end{array}$$

Concept Recap 8.6

Sol. 1. b, a, c, e, d

Sol. 2. c, e, b, a, d

Concept Recap 8.7

Sol. 1. (a)	6 4 L	(b)	1 9 6 L
	+ 2 8 L		+ 2 0 7 L
	<u>9 2 L</u>		<u>4 0 3 L</u>
(c)	7 4 L	(d)	6 4 5 mL
	- 3 6 L		- 3 7 8 mL
	<u>3 8 L</u>		<u>2 6 7 mL</u>

Sol. 2. The capacity of the tank is 34 L 871 ml.

$$\begin{array}{r} \text{L} \quad \text{ml} \\ 26 \text{ L } 385 \text{ ml} \\ + 8 \text{ L } 486 \text{ ml} \\ \hline 34 \text{ L } 871 \text{ ml} \end{array}$$

Interactive Practice

Sol. 1. (a) The weight of cauliflower is 1 kg.
(b) The weight of mangoes is 2 kg.
(c) The weight of watermelon is 5 kg.
(d) The weight of apples is 500 g.

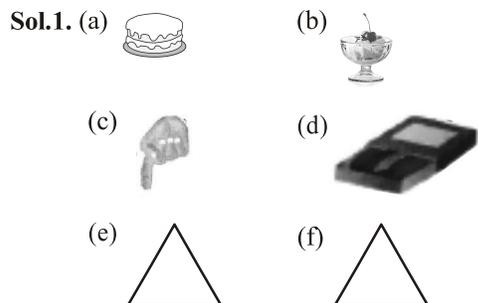
	
Sol. 2. (a) Inkpot	Aquarium
L <input type="checkbox"/> mL <input checked="" type="checkbox"/>	L <input checked="" type="checkbox"/> mL <input type="checkbox"/>
	
Cough syrup	Swimming Pool
L <input type="checkbox"/> mL <input checked="" type="checkbox"/>	L <input checked="" type="checkbox"/> mL <input type="checkbox"/>

Creative Corner

Do yourself.

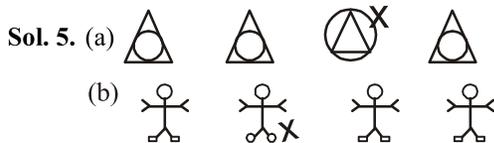
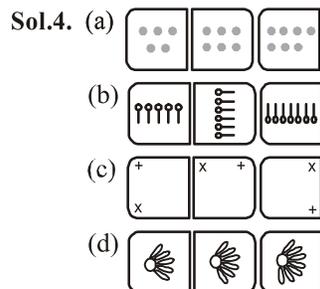
Chapter-9 Patterns

Concept Recap 9.1

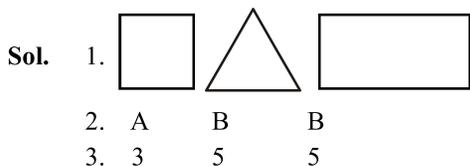


Sol. 2. (a) 0, 2 (b) 5, 5 (c) 3, 3

Sol. 3. (a) 11, 13 (b) 24, 28
 (c) 500, 600, 700 (d) 60, 50, 40



Interactive Practice



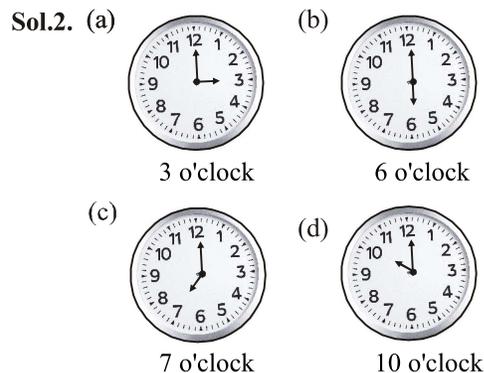
Creative Corner

1. 3A, 2. 5E, 3. 1C, 4. 4F, 5. 3D, 6. 4C, 7. 5B,
 8. 2D, 9. 1F, 10. 6B

Chapter-10 Time

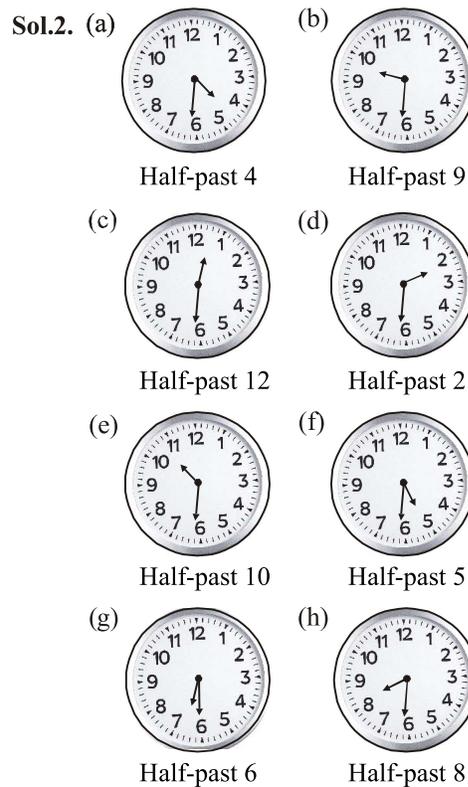
Concept Recap 10.1

Sol. 1. (a) Half-Past 9 or 9:30 (b) 5 o'clock or 5:00
 (c) 8 o'clock or 8:00 (d) 1 o'clock or 1:00



Concept Recap 10.2

Sol. 1. (a) Half-past 5 (b) Half-past 7
 (c) Half-past 4 (d) Half-past 1
 (e) Half-past 9 (f) Half-past 12
 (g) Half-past 3 (h) Half-past 10



Concept Recap 10.3

- Sol. 1.** (a) A.M. (b) P.M. (c) A.M.
(d) P.M. (e) P.M. (f) P.M.
- Sol. 2.** (a) Sunday (b) Saturday
(b) Wednesday (d) Friday
- Sol. 3.** (a) A leap year has 366 days.
(b) 1 week = 7 days.
(c) 2 weeks = 14 days.
(d) A years has 52 weeks.

Sol. 4. 3 days.

Sol. 5. 6 days.

Interactive Practice

- Sol. 1.** (a) There are 12 months in a year.
(b) 5th month of the year is May.
(c) August comes just after July.
(d) 4 months of a year have 30 days.
(e) I reach Mathura on Saturday. It was my Friend's birthday the next day. My friend's birthday was on Sunday.
- Sol. 2.** Do yourself.
- Sol. 3.** (a) False (b) True (c) False
(d) False (e) True

Creative Corner

- Sol. 1.** unasyd sunday
nomyad monday
esutady tuesday
dwesenayd wednesday
srthduay thursday
irdfya friday
yasarudt saturday

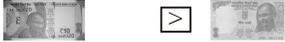
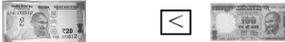
**Chapter-11
Money**

Concept Recap 11.1

- Sol. 1.** (a) ₹ 6 = 600 p (b) ₹ 9 = 900 p
(c) ₹ 10 = 1000 p (d) ₹ 8 = 800 p
- Sol. 2.** (a) ₹ 4 and 60 p = 460 p
(b) ₹ 8 and 75 p = 875 p
(c) ₹ 7 and 45 p = 745 p
(d) ₹ 9 and 85 p = 985 p
- Sol. 3.** (a) 200 p = ₹ 2 (b) 300 p = ₹ 3
(c) 400 p = ₹ 4 (d) 1000 p = ₹ 10
(e) 800 p = ₹ 8 (f) 900 p = ₹ 9
- Sol. 4.** (a) 245 p = ₹ 2 and 45 p
(b) 895 p = ₹ 8 and 95 p
(c) 605 p = ₹ 6 and 5 p
(d) 720 p = ₹ 7 and 20 p

Concept Recap 11.2

- Sol.1.** (a)  (b) 
(c)  (d) 
(e)  (f) 
(g)  (h) 

- Sol.2.** (a)  (b) 
(c)  and (d)  and

- (c)
$$\begin{array}{r} ₹ 1\ 3\ 2 \\ + ₹ 2\ 4\ 6 \\ \hline ₹ 3\ 7\ 8 \end{array}$$
- (d)
$$\begin{array}{r} ₹ 2\ 4\ 5 \\ + ₹ 1\ 3\ 2 \\ \hline ₹ 3\ 7\ 7 \end{array}$$
- Sol. 2.** (a)
$$\begin{array}{r} 8\ 7\ p \\ - 5\ 4\ p \\ \hline 3\ 3\ p \end{array}$$
- (b)
$$\begin{array}{r} 7\ 8\ p \\ - 6\ 3\ p \\ \hline 1\ 5\ p \end{array}$$
- (c)
$$\begin{array}{r} ₹ 5\ 3\ 2 \\ - ₹ 4\ 2\ 1 \\ \hline ₹ 1\ 1\ 1 \end{array}$$
- (d)
$$\begin{array}{r} ₹ 6\ 7\ 8 \\ - ₹ 5\ 6\ 4 \\ \hline ₹ 1\ 1\ 4 \end{array}$$

Concept Recap 11.3

- Sol. 1.** (a)
$$\begin{array}{r} 2\ 9\ p \\ + 3\ 5\ p \\ \hline 6\ 4\ p \end{array}$$
- (b)
$$\begin{array}{r} 6\ 5\ p \\ + 3\ 4\ p \\ \hline 9\ 9\ p \end{array}$$

Story sums on money

Sol. 1. Prachi spent ₹698.

$$\begin{array}{r} ₹ 283 \\ + ₹ 415 \\ \hline ₹ 698 \end{array}$$

Sol. 2. ₹ 35 is left with Monika.

$$\begin{array}{r} ₹ 60 \\ - ₹ 25 \\ \hline ₹ 35 \end{array}$$

Sol. 3. Vidya has ₹ 111.

$$\begin{array}{r} ₹ 46 \\ + ₹ 65 \\ \hline ₹ 111 \end{array}$$

Sol. 4. ₹ 244 were left with Kumkum's mother.

$$\begin{array}{r} ₹ 530 \\ - ₹ 286 \\ \hline ₹ 244 \end{array}$$

Interactive Practice

Sol. 1. (a) ₹ 3 and 19 p (b) ₹ 7 and 75 p
(c) ₹ 65 and 78 p (d) ₹ 80 and 08 p

Sol. 2. (a) 35 p (b) 89 p

$$\begin{array}{r} + 45 p \\ \hline 80 p \end{array} \quad \begin{array}{r} + 59 p \\ \hline 148 p \end{array}$$

$$\begin{array}{r} (c) 28 p \\ + 43 p \\ \hline 71 p \end{array} \quad \begin{array}{r} (d) 537 \\ + 241 \\ \hline 778 \end{array}$$

Sol. 3. (a) 67 p (b) 89 p

$$\begin{array}{r} - 28 p \\ \hline 39 p \end{array} \quad \begin{array}{r} - 53 p \\ \hline 36 p \end{array}$$

$$\begin{array}{r} (c) ₹ 416 \\ - ₹ 228 \\ \hline 188 \end{array} \quad \begin{array}{r} (d) ₹ 737 \\ - ₹ 359 \\ \hline 378 \end{array}$$

Sol. 4. (a) ₹ 245

$$\begin{array}{r} + ₹ 35 \\ \hline ₹ 280 \end{array}$$

$$\begin{array}{r} (b) ₹ 500 \\ - ₹ 249 \\ \hline ₹ 251 \end{array}$$

Creative Corner

Do yourself

**Chapter-12
Data Handling**

Concept Recap 12.1

Sol.1. (a) Chocolate (b) Peach
(c) 3 (d) 1
(e) Strawberry

Sol.2. (a) Five (Bus, Cycle, Car, Scooty, Rickshaw)
(b) Bus
(c) 2 (d) 15

Concept Recap 12.2

Sol.1. (1) Banana (2) Mango
(3) 33
(4) Banana > Orange > Apple > Grapes > Mango

Interactive Practice

Sol. 1. (a) Car, (b) Bike, (c) Rickshaw

Fruits	No. of fruits	Tally Marks
Apples	5	
Mangoes	8	
Oranges	10	
Bananas	16	
Guavas	9	

Creative Corner

Do yourself

Mathematics, Class-3

Chapter-1 Revision

- Sol.1.** (a) Number Name—Four hundred fifty-eight
 (b) Number—396
 (c) Number Name—Seven hundred sixty-three
 (d) Number Name—Five hundred ninety-two
 (e) Number—625
 (f) Number—907

Sol.2. (a) <, (b) <, (c) >, (d) >

Sol.3. (a) 127, 281, 292, 297, 729

(b) 343, 438, 650, 834, 848

Sol.4. (a) 552, 525, 340, 255, 252

(b) 848, 834, 635, 438, 343

Sol.5. (a) 300+4, (b) 500+20+1

(c) 600+70+5 (d) 700+80+6

Sol.6. (a) 6, (b) 0, (c) 90, (d) 60, (e) 0, (f) 50

Sol.7. (a) 753, (b) 630, (c) 980, (d) 621, (e) 964, (f) 873

Sol.8. (a) 407, (b) 699, (c) 832, (d) 756

Sol.9. (a) 551, (b) 212, (c) 114, (d) 311

Sol.10. (a) 66, (b) 66, (c) 80, (d) 89

Sol.11. (a) 5, (b) 6, (c) 223

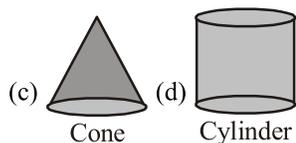
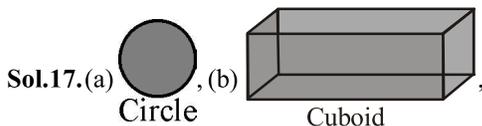
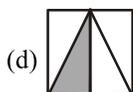
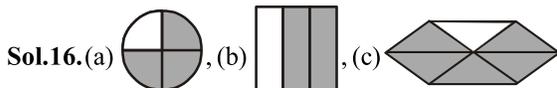
Sol.12. (a) 7

Sol.13. (a) April, June, September, November

Sol.14. (a) January, March, May, July, August,

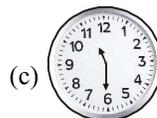
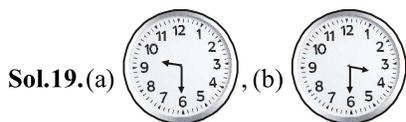
October, December

Sol.15. (a) 1/3, (b) 3/4, (c) 2/4



Sol.18. (a) Half past two, (b) Half past eight

(c) 6 o'clock



Sol.20. (a)

m	cm
440	22
+ 332	44
<hr/>	<hr/>
772	66

 (b)

L	mL
141	273
+ 345	130
<hr/>	<hr/>
486	403

Sol.21. (a) 3 5 0 m (b) 9 5 2 Kg

– 1 5 4 m – 4 5 2 Kg

1 9 6 m

5 0 0 Kg

(c) ₹ 8 6 1 (d) ₹ 3 0 0

– ₹ 8 5 7 – ₹ 2 6 5

₹ 0 0 4 = ₹ 4

₹ 0 3 5 = ₹ 35

Sol.22. 9 8 4 **Sol. 23.** 1 2 5

– 3 4 5 × 7

6 3 9

8 7 5

639 fruits are
good to eat.

Anjali will use 875
beads.

Sol.24.
$$\begin{array}{r} 21 \\ 8 \overline{) 168} \\ \underline{-16} \\ 8 \\ \underline{-8} \\ 0 \end{array}$$
 21 boxes will be needed
to pack 168 balls.

Chapter-2

Numbers up to Ten Thousand

Concept Recap 2.1

Sol.1. (a) Three thousand four hundred thirteen
= 3413

(b) Four thousand seven hundred three
= 4703

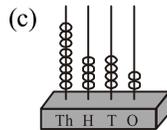
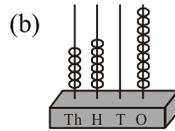
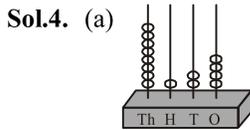
Sol.2. (a) Two thousand one hundred thirty-six

(b) Seven thousand one hundred eighty-five

(c) Four thousand six hundred thirty-two

(d) Five thousand one hundred ninety

Sol.3. (a) 4523, (b) 5042, (c) 7940



Concept Recap 2.2

Sol.1. (a) 30, (b) 3, (c) 90, (d) 3000

Sol.2. (a) 7 thousands + 2 hundreds + 0 tens + 6 ones
(b) 4 thousands + 0 hundreds + 4 tens + 9 ones

Sol.3. (a) $1000 + 500 + 70 + 6$
(b) $3000 + 200 + 0 + 5$
(c) $6000 + 0 + 20 + 7$
(d) $7000 + 200 + 40 + 3$

Sol.4. (a) 4056, (b) 5247, (c) 6008

Sol.5. (b) 2583, (c) 3954, (d) 4690

Concept Recap 2.3

Sol.1. (a) <, (b) >, (c) <, (d) =, (e) =, (f) >

Sol.2. (a) 5770, (b) 1003

Sol.3. (a) 6345, (b) 9691

Sol.4. (a) 5261, 2651, 1625, 1516
(b) 3602, 3062, 402, 203

Sol.5. (a) 199, 1009, 1090, 1190
(b) 574, 1375, 1573, 3457

Sol.6.

$7985 < 9025$
or $9025 > 7985$
So, Mr. Sharma gets more salary.

Sol.7.

$2680 < 3095$
or $3095 > 2680$
So, Rohan saved more money.

Concept Recap 2.4

Sol.1. (a) 2962, (b) 5481, (c) 6070, (d) 2289, (e) 3282,
(f) 4564, (g) 6786, (h) 9889

Sol.2. (a) 9531, 1359 (b) 7620, 2067
(c) 9854, 4589 (d) 7631, 1367

Sol.3. (a) 8853, 3358 (b) 7720, 2007
(c) 8840, 4008 (d) 9976, 6679

Concept Recap 2.5

Sol.1. (a) even, (b) odd, (c) odd, (d) odd, (e) even,
(f) odd, (g) odd, (h) even

Sol.2. 1002, 1004, 1006, 1008, 1010, 1012, 1016, 1018,
1020

Sol.3. 2051, 2053, 2055, 2057, 2059, 2061, 2063, 2065,
2069

Sol.4. (a) 70, (b) 200, (c) 280, (d) 2760

Concept Recap 2.6

Sol.1. 2600, 2610, 2620, 2640

Sol.2. 2835, 3035, 3235

Sol.3. 4205, 5205, 7205, 8205

Sol.4. 8587, 8589, 8591, 8593, 8593, 9595, 8595, 8597,
8599, 8601

Sol.5. 6887, 6897, 6907, 6917, 6927, 6937

Sol.6. 4999, 5099, 5199, 5299, 5399, 5499

Sol.7. 4609, 5609, 6609, 7609, 8609, 9609, 10609

Concept Recap 2.6

Sol.1. (a) $8 = 5 + 3 = V + III = VIII$
(b) $12 = 10 + 2 = X + II = XII$
(c) $19 = 10 + 9 = 10 + (10 - 1) = X + (X - 1) = X + IX$
(d) $23 = 20 + 3 = XX + III = XXIII$
(e) $26 = 20 + 5 + 1 = XX + V + I = XXVI$
(f) $29 = 20 + 9 = 20 + (10 - 1) = XX + IX = XXIX$
(g) $31 = 30 + 1 = XXX + I = XXXI$
(h) $34 = 30 + 4 = XXX + IV = XXXIV$
(i) $38 = 30 + 5 + 3 = XXX + V + III = XXXVIII$
(j) $42 = 40 + 2 = (50 - 10) + 2 = XL + II = XLII$
(k) $46 = 40 + 5 + 1 = (50 - 10) + V + I = XL + V + I = XLVI$
(l) $47 = 40 + 7 = (50 - 10) + 5 + 2 = XL + V + II = XLVII$

Sol.2. (a) $XI = 11$, $XI = 11$
 $XI = XI$
(b) $XII = 12 = XXIII = 23$
 $XII < XIII$
(c) $XIV = 14$, $XIV = 14$
 $XIV = XIV$
(d) $XXI = 21$, $XXX = 30$
 $XXI < XXX$
(e) $XIX = 19$, $XVIII = 18$
 $XIX > XVIII$
(f) $XXXV = 35$, $XXVII = 28$
 $XXXV > XXVII$

Sol.3. (a) Meaningful, (b) Meaningful
(c) Meaningless, because the symbol V cannot be repeated.
(d) Meaningless, because V cannot be subtracted.
(e) Meaningful

- (f) Meaningless, because any symbol cannot be repeated more than three times.
 (g) Meaningless, because IX cannot be subtracted from VI.
 (h) Meaningless, because IX cannot be subtracted from VI.
- Sol.4.** (a) $XII + XI = 12 + 11 = 23 = XXIII$
 (b) $VIII + IX = 8 + 9 = 17 = XVII$
 (c) $VII + XIV = 7 + 14 = 21 = XXI$
 (d) $XI - V = 11 - 5 = 6 = VI$
 (e) $XVII - IX = 17 - 9 = 8 = VIII$
 (f) $XXX - XXVI = 30 - 26 = 4 = IV$

Interactive Practice

- Sol.1.** (a) 700, (b) 3, (c) 7000
Sol.2. (a) Two thousand thirty-six
 (b) Five thousand three hundred sixteen
 (c) Two thousand seven hundred ninety-two
 (d) Eight thousand seven hundred thirty-nine
Sol.3. (a) 6209, (b) 7091
Sol.4. (a) $2472 = 2000 + 400 + 70 + 2$
 (b) $3362 = 3000 + 300 + 60 + 2$
 (c) $7052 = 7000 + 50 + 2$
Sol.5. (a) $1000 + 80 = 1080$
 (b) $9000 + 800 + 6 = 9806$
 (c) $7000 + 600 + 40 + 2 = 7642$
Sol.6. (a) $193 < 931$, (b) $2889 < 2898$
 (c) $8018 = 8000 + 10 + 8$
 (d) $300 < \text{Three hundred ninety}$
Sol.7. (a) 2197, 2864, 2913, 2984
 (b) 4318, 5497, 6412, 7999
Sol.8. (a) 6890, 2766, 525, 301
 (b) 6789, 5678, 5457, 3435
Sol.9. (a) 4691, (b) 9633, (c) 5504, (d) 8926
Sol.10. (a) 3895, (b) 4655, (c) 7000, (d) 7900
Sol.11. Greatest number = 9710,
 Smallest number = 1079
Sol.12. 1000, yes, yes
Sol.13. (a) even, (b) odd, (c) odd, (d) even
Sol.14. 9063
Sol.15. (a) 121510 (b) 121509 (c) 121511
Sol.16. (a) II (b) IX (c) IV
Sol.17. (a) IV (b) X (c) V
Sol.18. (a) = (b) < (c) > (d) <

Creative Corner

Do yourself

**Chapter-3
Addition**

Concept Recap 3.1

Sol.1. (a) 8778, (b) 5899, (c) 5399

Sol.2. (a) 6738, (b) 7789, (c) 9483, (d) 7600,

Concept Recap 3.2

Sol.1. (a) 9000, (b) 7927, (c) 7585

Sol.2. (a) 7777, (b) 4416, (c) 11106, (d) 7212,

Concept Recap 3.3

Sol.1. (a) $82 + 10 = 92$ (b) $167 + 10 = 177$

(c) $231 + 30 = 261$ (d) $148 + 50 = 198$

(e) $431 + 400 = 831$ (f) $517 + 200 = 717$

(g) $7312 + 100 = 7412$ (h) $3473 + 300 = 3773$

Sol.2. (a) Actual sum Estimated sum

58	58 \longrightarrow 60
+ 62	62 \longrightarrow + 60
120	120

(b) Actual sum Estimated sum

183	183 \longrightarrow 180
+ 287	287 \longrightarrow + 290
470	470

(c) Actual sum Estimated sum

302	302 \longrightarrow 300
+ 691	691 \longrightarrow + 690
993	990

(d) Actual sum Estimated sum

1669	1670
+ 1498	+ 1500
3167	3170

(e) Actual sum Estimated sum

4511	4510
+ 6721	+ 6720
11232	11230

(f) Actual sum Estimated sum

2899	2900
+ 3101	+ 3100
6000	6000

Concept Recap 3.4

Sol.1. (a) 4086, (b) 3461, (c) 5580, (d) 3367

Sol.2. (a) 495, (b) 83, (c) 5601, (d) 4441, (e) 902,

(f) 98, 2867

Concept Recap 3.5

Sol.1. No. of eggs sold in first week = 1048
 No. of eggs sold in second week = +1638
 Total eggs = 2686

Sol.2. No. of women = 2654
 No. of men = +3729
 Total people = 6383

Sol.3. No. of visitors on Monday = 2358
 No. of visitors on Tuesday = +3946
 Total people = 6304

Sol.4. No. of bags of rice in one store = 4563
 No. of bags of rice in another store = +4808
9371

Concept Recap 3.6**Sol.1.** Do yourself

Sol.2. (a) Th H T O

$$\begin{array}{r} \boxed{2} \ 4 \ 5 \ \boxed{3} \\ + 6 \ \boxed{5} \ 6 \ 8 \\ \hline 9 \ 0 \ 2 \ 1 \end{array}$$

(c) Th H T O

$$\begin{array}{r} \boxed{4} \ 2 \ \boxed{8} \ 7 \\ + 1 \ \boxed{4} \ 9 \ \boxed{6} \\ \hline 5 \ 7 \ 8 \ 3 \end{array}$$

(b) Th H T O

$$\begin{array}{r} 1 \ 3 \ \boxed{4} \ \boxed{9} \\ + \boxed{7} \ \boxed{9} \ 6 \ 8 \\ \hline 9 \ 3 \ 1 \ 7 \end{array}$$

Intracative practice

Sol.1. (a) 2401

$$\begin{array}{r} 1036 \\ 101 \\ + 60 \\ \hline 3598 \end{array}$$

(b) 5360

$$\begin{array}{r} 407 \\ 111 \\ + 21 \\ \hline 5899 \end{array}$$

Sol.2. (a) Th H T O

$$\begin{array}{r} 5 \ 7 \ 8 \ \boxed{7} \\ + 2 \ 3 \ \boxed{7} \ 9 \\ \hline \boxed{8} \ 1 \ 6 \ 6 \end{array}$$

(b) Th H T O

$$\begin{array}{r} 6 \ \boxed{2} \ \boxed{8} \ 4 \\ + 1 \ 7 \ 9 \ \boxed{8} \\ \hline \boxed{8} \ 0 \ 8 \ 2 \end{array}$$

(c) Th H T O

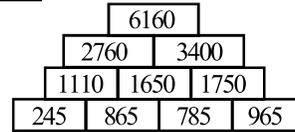
$$\begin{array}{r} 3 \ \boxed{2} \ 6 \ 1 \\ + \boxed{5} \ 5 \ \boxed{2} \ 8 \\ \hline 8 \ 7 \ 8 \ \boxed{9} \end{array}$$

Sol.3. (a) $2357 + 1876 = 1876 + 2357$
 (b) $4689 + 1831 = 1831 + 4689$
 (c) $5137 + 2391 = 2391 + 5137$
 (d) $(2346 + 1530) + 1734 = 2346 + (1530 + 1734)$

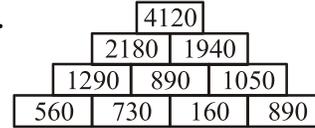
Sol.4. (a) $53 + 42 + 47 + 48 = (53 + 47) + (42 + 48)$
 $= 100 + 100$
 $= 200$

(b) $291 + 378 + 109 + 122$
 $= (291 + 109) + (378 + 122)$
 $= 400 + 500 = 900$

Sol.5. Wednesday = 4568
 Thursday = +2987
7555

Creative Corner**Sol.1.**

2.

**Chapter-4
Subtraction****Concept Recap 4.1**

Sol.1. (a) Th H T O

$$\begin{array}{r} 6 \ 5 \ 4 \ 8 \\ - 4 \ 3 \ 3 \ 6 \\ \hline 2 \ 2 \ 1 \ 2 \end{array}$$

(b) Th H T O

$$\begin{array}{r} 7 \ 9 \ 8 \ 4 \\ - 3 \ 7 \ 1 \ 4 \\ \hline 4 \ 2 \ 7 \ 0 \end{array}$$

(c) Th H T O

$$\begin{array}{r} 9 \ 4 \ 8 \ 2 \\ - 6 \ 3 \ 4 \ 0 \\ \hline 3 \ 1 \ 4 \ 2 \end{array}$$

Sol.2. (a) Th H T O

$$\begin{array}{r} 6 \ 3 \ 5 \ 9 \\ - 3 \ 2 \ 4 \ 5 \\ \hline 3 \ 1 \ 1 \ 4 \end{array}$$

(b) Th H T O

$$\begin{array}{r} 7 \ 6 \ 0 \ 4 \\ - 5 \ 6 \ 0 \ 2 \\ \hline 2 \ 0 \ 0 \ 2 \end{array}$$

(c) Th H T O

$$\begin{array}{r} 9 \ 9 \ 3 \ 9 \\ - 7 \ 8 \ 3 \ 5 \\ \hline 2 \ 1 \ 0 \ 4 \end{array}$$

Sol.3. (a) Th H T O

$$\begin{array}{r} 5 \ 3 \ 6 \ 7 \\ - 5 \ 1 \ 4 \ 6 \\ \hline 0 \ 2 \ 2 \ 1 \end{array}$$

(b) Th H T O

$$\begin{array}{r} 9 \ 4 \ 4 \ 7 \\ - 7 \ 2 \ 3 \ 4 \\ \hline 2 \ 2 \ 1 \ 3 \end{array}$$

$$\begin{array}{r} \text{(c) Th H T O} \\ 6\ 8\ 4\ 9 \\ -\ 4\ 5\ 2\ 3 \\ \hline 2\ 3\ 2\ 6 \end{array}$$

Sol.4.
$$\begin{array}{r} \text{Th H T O} \\ 5\ 0\ 9\ 4 \\ -\ 3\ 0\ 5\ 2 \\ \hline 2\ 0\ 4\ 2 \end{array}$$

- Sol.5.** (a) $2345 - 0 = 2345$
 (b) $6785 - 6785 = 0$
 (c) $7336 - 1 = 7335$
 (d) $5433 - 10 = 5423$
 (e) $9543 - 100 = 9443$
 (f) $6770 - 1000 = 5770$

Concept Recap 4.2

Sol.1. Subtract:

$$\begin{array}{r} \text{(a) Th H T O} \\ 4\ 6\ 3\ 2 \\ -\ 3\ 7\ 6\ 5 \\ \hline 0\ 8\ 6\ 7 \end{array}$$

$$\begin{array}{r} \text{(b) Th H T O} \\ 9\ 0\ 2\ 0 \\ -\ 8\ 9\ 6\ 4 \\ \hline 0\ 0\ 5\ 6 \end{array}$$

Sol.2. (a)
$$\begin{array}{r} \text{Th H T O} \\ 7\ 7\ 7\ 7 \\ -\ 4\ 9\ 9\ 7 \\ \hline 2\ 7\ 8\ 0 \end{array}$$

$$\begin{array}{r} \text{(c) Th H T O} \\ 7\ 4\ 6\ 7 \\ -\ 5\ 1\ 8\ 6 \\ \hline 2\ 2\ 8\ 4 \end{array}$$

Sol.3. (a)
$$\begin{array}{r} \text{Th H T O} \\ 8\ 9\ 0\ 9 \\ -\ 6\ 4\ 5\ 4 \\ \hline 2\ 4\ 5\ 5 \end{array}$$

$$\begin{array}{r} \text{(c) Th H T O} \\ 6\ 7\ 6\ 7 \\ -\ 4\ 9\ 7\ 6 \\ \hline 1\ 7\ 9\ 1 \end{array}$$

Concept Recap 4.3

Sol.1. Subtract:

$$\begin{array}{r} \text{(a) Th H T O} \\ 6\ \boxed{6}\ 5\ 7 \\ -\ \boxed{1}\ 4\ 2\ 1 \\ \hline 5\ 2\ 3\ \boxed{6} \end{array}$$

$$\begin{array}{r} \text{(c) Th H T O} \\ 4\ 0\ 0\ 0 \\ -\ 2\ 8\ 3\ 2 \\ \hline 1\ 1\ 6\ 8 \end{array}$$

(b)
$$\begin{array}{r} \text{Th H T O} \\ 5\ 6\ 6\ 7 \\ -\ 4\ 9\ 9\ 4 \\ \hline 0\ 6\ 7\ 3 \end{array}$$

(b)
$$\begin{array}{r} \text{Th H T O} \\ 8\ 7\ 9\ 9 \\ -\ 8\ 4\ 9\ 0 \\ \hline 0\ 3\ 0\ 9 \end{array}$$

(b)
$$\begin{array}{r} \text{Th H T O} \\ 3\ 2\ 5\ 7 \\ -\ \boxed{1}\ 1\ \boxed{4}\ \boxed{5} \\ \hline 2\ \boxed{1}\ 1\ 2 \end{array}$$

$$\begin{array}{r} \text{(c) Th H T O} \\ 7\ 6\ 4\ \boxed{9} \\ -\ 6\ 5\ \boxed{2}\ 9 \\ \hline 1\ 1\ 2\ 0 \end{array}$$

Sol.2. (a)

Actual difference	Estimated sum
$\begin{array}{r} 873 \\ -\ 556 \\ \hline 317 \end{array}$	$\begin{array}{r} 870 \\ -\ 560 \\ \hline 310 \end{array}$

(b)

Actual difference	Estimated sum
$\begin{array}{r} 5114 \\ -\ 3257 \\ \hline 1857 \end{array}$	$\begin{array}{r} 5110 \\ -\ 3260 \\ \hline 1850 \end{array}$

(c)

Actual difference	Estimated sum
$\begin{array}{r} 9108 \\ -\ 6536 \\ \hline 2572 \end{array}$	$\begin{array}{r} 9110 \\ -\ 6540 \\ \hline 2570 \end{array}$

Concept Recap 4.4

Sol.1. Total seats = 3100
 No. of persons = -2931
 Vacant seats =
$$\begin{array}{r} 3100 \\ -\ 2931 \\ \hline 0169 \end{array}$$

Sol.2. Total bags of rice = 5908
 No. of bags sold = -3764
 No. of bags left =
$$\begin{array}{r} 5908 \\ -\ 3764 \\ \hline 2144 \end{array}$$

Sol.3. Total Sheets = 9825
 Sheets used = -6452
 Sheets left =
$$\begin{array}{r} 9825 \\ -\ 6452 \\ \hline 3373 \end{array}$$

Sol.4. Total packets = 8404
 Packets distributed = -7681
 Packets left =
$$\begin{array}{r} 8404 \\ -\ 7681 \\ \hline 0723 \end{array}$$

Concept Recap 4.5

Sol.1. (a)

$\begin{array}{r} 3825 \\ +\ 1888 \\ \hline 5713 \end{array}$	$\begin{array}{r} 5713 \\ -\ 987 \\ \hline 4726 \end{array}$
---	--

$\therefore 3825 + 1888 - 987 = 4726$

(b)

$\begin{array}{r} 8976 \\ -\ 5100 \\ \hline 3876 \end{array}$	$\begin{array}{r} 3876 \\ +\ 1000 \\ \hline 4876 \end{array}$
---	---

$\therefore 8976 - 5100 + 1000 = 4876$

$$\begin{array}{r} \text{(c) } 8532 \quad 1986 \quad 12288 \\ + 3756 \text{ and } 5288 \quad - 7274 \\ \hline 12288 \quad 7274 \quad 5014 \end{array}$$

$$\begin{aligned} \therefore 8532 - 1986 + 3756 - 5288 \\ = 8532 + 3756 - 1986 - 5288 \\ = 5014 \end{aligned}$$

$$\begin{array}{r} \text{(d) } 2634 \quad 834 \quad 4321 \\ + 1687 \text{ and } 1622 \quad - 2456 \\ \hline 4321 \quad 2456 \quad 1865 \end{array}$$

$$\therefore 2634 + 1687 - 834 - 1622 = 1865$$

Sol.2. Money left with Prachi = ₹ 8530 -
(₹ 2295 + ₹ 3685)
= ₹ 8530 - ₹ 5980
= ₹ 2550

$$\begin{array}{r} 2295 \quad 8530 \\ + 3685 \quad - 5980 \\ \hline 5980 \quad 2550 \end{array}$$

Sol.3. No. of Children = $8125 - (2896 - 2567)$
 $= 8125 - 5463 = 2662$

$$\begin{array}{r} 2896 \quad 8125 \\ + 2567 \quad - 5463 \\ \hline 5463 \quad 2662 \end{array}$$

Sol.4. No. of persons visited the zoo on Sunday
 $= 8034 - (3548 + 1698)$
 $= 8034 - 5246 = 2788$

$$\begin{array}{r} 3548 \quad 8034 \\ + 1698 \quad - 5246 \\ \hline 5246 \quad 2788 \end{array}$$

Interactive practice

Sol.1. (a) $6432 - 2785 = 3647$ (b) $5937 - 2889 = 3048$ (c) $7542 - 3875 = 3667$

Sol.2. (a) $8295 - 0 = 8295$ (b) $6783 - 6783 = 0$
(c) $4228 - 0 = 4228$

Sol.3. (a) $1678 - 5432 + 6700 - 598$
 $= 1678 + 6700 - 5432 - 598 = 2348$

$$\begin{array}{r} 1678 \quad 5432 \quad 8378 \\ + 6700 \text{ and } + 598 \quad - 6030 \\ \hline 8378 \quad 6030 \quad 2348 \end{array}$$

(b) $6284 - 6237 + 1098 - 956$
 $= 6284 + 1098 - 6237 - 956$
 $= 7382 - 7193 = 189$

$$\begin{array}{r} 6284 \quad 6237 \quad 7382 \\ + 1098 \text{ and } + 956 \quad - 7193 \\ \hline 7382 \quad 7193 \quad 189 \end{array}$$

Sol.4. Postcards with suji = 3750

$$\begin{array}{r} -2692 \\ \hline 1058 \end{array}$$

Hence, Suji have 1058 postcards.

Sol.5. (a) $8183 \longrightarrow 8180$

$3186 \longrightarrow -3190$

Estimated difference = $\underline{4990}$

(b) $7248 \longrightarrow 7250$

$4692 \longrightarrow -4700$

Estimated difference = $\underline{2550}$

(c) $6128 \longrightarrow 6130$

$4397 \longrightarrow -4400$

Estimated difference = $\underline{1730}$

Sol.6. First number is 1500 and other number is 500.
as, $1500 + 500 = 2000$
and $1500 - 500 = 1000$

Chapter-5 Multiplication

Concept Recap 5.1

Sol.1. (a) 4, 3 (b) 2, 7

Sol.2. (a) 35, (b) 54, (c) 25

Sol.3. (a) 6, (b) 6, (c) 9

Sol.4. (a) 23, (b) 67, (c) 1, (d) 870, (e) 8, (f) 7,
(g) 20

Concept Recap 5.2

Sol.1. (a) H T O (b) H T O (c) H T O

$$\begin{array}{r} 132 \quad 413 \quad 210 \\ \times 3 \quad \times 2 \quad \times 4 \\ \hline 396 \quad 826 \quad 840 \end{array}$$

Sol.2. (a) Th H T O (b) Th H T O (c) Th H T O

$$\begin{array}{r} 456 \quad 867 \quad 608 \\ \times 8 \quad \times 6 \quad \times 5 \\ \hline 3648 \quad 5202 \quad 3040 \end{array}$$

Concept Recap 5.3

Sol.1. (a) Th H T O (b) Th H T O (c) Th H T O

$$\begin{array}{r} 2313 \quad 1032 \quad 1243 \\ \times 3 \quad \times 2 \quad \times 2 \\ \hline 6939 \quad 2064 \quad 2486 \end{array}$$

$$\begin{array}{r} \text{(d) Th H T O} \\ 2759 \\ \times 3 \\ \hline 8277 \end{array}$$

$$\begin{array}{r} \text{(e) Th H T O} \\ 3056 \\ \times 3 \\ \hline 9168 \end{array}$$

$$\begin{array}{r} \text{(f) Th H T O} \\ 2234 \\ \times 4 \\ \hline 8936 \end{array}$$

$$\text{Sol.2. (a) } \begin{array}{r} 3018 \\ \times 2 \\ \hline 6036 \end{array}$$

$$\text{(b) } \begin{array}{r} 2782 \\ \times 3 \\ \hline 8346 \end{array}$$

$$\text{(c) } \begin{array}{r} 1672 \\ \times 5 \\ \hline 8360 \end{array}$$

Concept Recap 5.4

Sol.1. (a) 9490, (b) 3260, (c) 7640, (d) 2900

(e) 40000, (f) 8600, (g) 34200, (h) 42100

Sol.2. (a) $39 \times 20 = 39 \times 2 \times 10 = 78 \times 10 = 780$

(b) $76 \times 60 = 76 \times 6 \times 10 = 456 \times 10 = 4560$

(c) $78 \times 70 = 78 \times 7 \times 10 = 546 \times 10 = 5460$

(d) $42 \times 200 = 42 \times 2 \times 100 = 84 \times 100 = 8400$

(e) $36 \times 300 = 36 \times 3 \times 100 = 108 \times 100 = 10800$

(f) $49 \times 400 = 49 \times 4 \times 100 = 196 \times 100 = 19600$

(g) $72 \times 600 = 72 \times 6 \times 100 = 432 \times 100 = 43200$

(h) $44 \times 700 = 44 \times 7 \times 100 = 308 \times 100 = 30800$

Sol.3. (a) 10, (b) 100, (c) 100, (d) 1000, (e) 10, (f) 100

Sol.4. (a) $16 \times 600 \times 3 = 16 \times 1800 = (16 \times 18) \times 100 = 288 \times 100 = 28800$

(b) $14 \times 10 \times 20 = 14 \times 200 = (14 \times 2) \times 100 = 28 \times 100 = 2800$

(c) $6 \times 70 \times 10 = (6 \times 7) \times 100 = 42 \times 100 = 4200$

Concept Recap 5.5

$$\begin{array}{r} \text{Sol.1. (a) H T O} \\ 27 \\ \times 18 \\ \hline 216 \\ 270 \\ \hline 486 \end{array}$$

$$\begin{array}{r} \text{(b) H T O} \\ 82 \\ \times 46 \\ \hline 492 \\ 3280 \\ \hline 3772 \end{array}$$

$$\begin{array}{r} \text{(c) H T O} \\ 95 \\ \times 53 \\ \hline 285 \\ 4750 \\ \hline 5035 \end{array}$$

$$\begin{array}{r} \text{Sol.2. (a)} \\ 96 \\ \times 52 \\ \hline 192 \\ 4800 \\ \hline 4992 \end{array}$$

$$\begin{array}{r} \text{(b)} \\ 74 \\ \times 39 \\ \hline 666 \\ 2220 \\ \hline 2886 \end{array}$$

$$\begin{array}{r} \text{(c)} \\ 78 \\ \times 46 \\ \hline 468 \\ 3120 \\ \hline 3588 \end{array}$$

$$\begin{array}{r} \text{(d)} \\ 79 \\ \times 24 \\ \hline 316 \\ 1580 \\ \hline 1896 \end{array}$$

$$\begin{array}{r} \text{(e)} \\ 48 \\ \times 17 \\ \hline 336 \\ 480 \\ \hline 816 \end{array}$$

$$\begin{array}{r} \text{(f)} \\ 35 \\ \times 74 \\ \hline 140 \\ 2450 \\ \hline 2590 \end{array}$$

$$\begin{array}{r} \text{(g)} \\ 59 \\ \times 37 \\ \hline 413 \\ 1770 \\ \hline 2183 \end{array}$$

$$\begin{array}{r} \text{(h)} \\ 75 \\ \times 58 \\ \hline 600 \\ 3750 \\ \hline 4350 \end{array}$$

$$\begin{array}{r} \text{(i)} \\ 67 \\ \times 56 \\ \hline 402 \\ 3350 \\ \hline 3752 \end{array}$$

Concept Recap 5.6

Sol.1. (a) Th H T O (b) Th H T O (c) Th H T O

$$\begin{array}{r} 319 \\ \times 15 \\ \hline 1595 \\ 3190 \\ \hline 4785 \end{array}$$

$$\begin{array}{r} 184 \\ \times 26 \\ \hline 1104 \\ 3680 \\ \hline 4784 \end{array}$$

$$\begin{array}{r} 465 \\ \times 21 \\ \hline 465 \\ 9300 \\ \hline 9765 \end{array}$$

Sol.2. (a) 247×34 (b) 304×23 (c) 289×28

$$\begin{array}{r} 988 \\ 7410 \\ \hline 8398 \end{array}$$

$$\begin{array}{r} 912 \\ 6080 \\ \hline 6992 \end{array}$$

$$\begin{array}{r} 2312 \\ 5780 \\ \hline 8092 \end{array}$$

$$\begin{array}{r} \text{(d)} \\ 199 \\ \times 47 \\ \hline 1393 \\ 7960 \\ \hline 9353 \end{array}$$

$$\begin{array}{r} \text{(e)} \\ 407 \\ \times 16 \\ \hline 2442 \\ 4070 \\ \hline 6512 \end{array}$$

$$\begin{array}{r} \text{(f)} \\ 385 \\ \times 24 \\ \hline 1540 \\ 7700 \\ \hline 9240 \end{array}$$

Concept Recap 5.7

Sol.1. No. of people in a bus = 48

No. of people in 76 buses = $48 \times 76 = 4860$

$$\begin{array}{r} 48 \\ \times 76 \\ \hline 288 \\ 3360 \\ \hline 3648 \end{array}$$

Sol.2. No. of beads in 1 chain = 135

No. of beads in 36 chains = $135 \times 36 = 4860$

$$\begin{array}{r} 135 \\ \times 36 \\ \hline 810 \\ 4050 \\ \hline 4860 \end{array}$$

Sol.3. Cost of 1 chair = 175 rupees
 Cost of 34 chairs = 175×34 rupees
 = 5950 rupees

$$\begin{array}{r} 175 \\ \times 34 \\ \hline 700 \\ 5250 \\ \hline 5950 \end{array}$$

Sol.4. Total collection = ₹ 1045×6
 = ₹ 6,270

$$\begin{array}{r} 1045 \\ \times 6 \\ \hline 6270 \end{array}$$

Concept Recap 5.8

Teachers and students are advised to create word problems in their own words.

Interactive practice

Sol. 1. (a) $8 \times 7 = 7 \times 8$ (b) $6 \times 5 = 5 \times 6$
 (c) $3 \times 4 = 4 \times 3$ (d) $2 \times 4 = 4 \times 2$
 (e) $1 \times 8 = 8$
 (f) $9 \times 1 = 9$ (g) $8 \times 0 = 0$
 (h) $3 \times (5 \times 7) = (3 \times 5) \times 7$
 (i) $6 \times (30 + 9) = (6 \times 30) + (6 \times 9)$

Sol.2. (a) $689 \times 10 = 6890$
 (b) $84 \times 100 = 8400$
 (c) $7 \times 1000 = 7000$
 (d) $74 \times 40 = 74 \times 4 \times 10 = 296 \times 10 = 2960$
 (e) $61 \times 60 = 61 \times 6 \times 10 = 366 \times 10 = 3660$
 (f) $38 \times 200 = 38 \times 2 \times 100 = 76 \times 100 = 7600$
 (g) $27 \times 300 = 27 \times 3 \times 100 = 81 \times 100$
 = 8100
 (h) $14 \times 600 = 14 \times 6 \times 100 = 84 \times 100$
 = 8400
 (i) $15 \times 800 = 15 \times 8 \times 100 = 120 \times 100$
 = 12000

Sol.3. (a) $649 \times 9 = 5841$ (b) $968 \times 8 = 7744$ (c) $835 \times 7 = 5845$

Sol.4. (a) $35 \times 17 = 245$ (b) $52 \times 48 = 416$ (c) $68 \times 42 = 136$

$350 \times 17 = 5950$ $2080 \times 48 = 24960$ $2720 \times 42 = 28560$

Sol.5. Rice in 1 bag = 35 Kg
 Rice in 256 bags = 256×35 Kg
 = 8960 Kg

$$\begin{array}{r} 256 \\ \times 35 \\ \hline 1280 \\ 7680 \\ \hline 8960 \end{array}$$

Sol.6. Weight of a book = 1250 g 1250
 Weight of 7 books = 1250×7 g $\times 7$
 = 8750 g 8750

Creative Activity

Sol. Across \longrightarrow B. $21 \times 13 = 273$
 D. $17 \times 39 = 663$
 F. $37 \times 24 = 888$
 G. $329 \times 20 = 6580$

Down \downarrow A. $28 \times 31 = 868$
 B. $53 \times 45 = 2385$
 C. $236 \times 15 = 3540$
 E. $49 \times 14 = 686$

A	8		B	2	7	C	3
	D	6	E	6	3		5
	F	8	8	8			4
			G	6	5	8	0

Chapter-6 Division

Concept Recap 6.1

Sol.1

<p>(a)</p> $\begin{array}{r} 16 \\ -4 \leftarrow \textcircled{1} \\ \hline 12 \\ -4 \leftarrow \textcircled{2} \\ \hline 8 \\ -4 \leftarrow \textcircled{3} \\ \hline 4 \\ -4 \leftarrow \textcircled{4} \\ \hline 0 \end{array}$ <p>\therefore Quotient = 4</p>	<p>(b)</p> $\begin{array}{r} 25 \\ -5 \leftarrow \textcircled{1} \\ \hline 20 \\ -5 \leftarrow \textcircled{2} \\ \hline 15 \\ -5 \leftarrow \textcircled{3} \\ \hline 10 \\ -5 \leftarrow \textcircled{4} \\ \hline 0 \end{array}$ <p>\therefore Quotient = 4</p>
---	---

(c)

$$\begin{array}{r} 72 \\ -8 \leftarrow \textcircled{1} \\ \hline 64 \\ -8 \leftarrow \textcircled{2} \\ \hline 56 \\ -8 \leftarrow \textcircled{3} \\ \hline 48 \\ -8 \leftarrow \textcircled{4} \\ \hline 40 \\ -8 \leftarrow \textcircled{5} \\ \hline 32 \\ -8 \leftarrow \textcircled{6} \\ \hline 24 \\ -8 \leftarrow \textcircled{7} \\ \hline 16 \\ -8 \leftarrow \textcircled{8} \\ \hline 8 \\ -8 \leftarrow \textcircled{9} \\ \hline 0 \end{array}$$

\therefore Quotient = 9

Sol.2 (a) $4 \times 9 = 36 \begin{cases} \rightarrow 36 \div 4 = 9 \\ \rightarrow 36 \div 9 = 4 \end{cases}$

(b) $8 \times 5 = 40 \begin{cases} \rightarrow 40 \div 8 = 5 \\ \rightarrow 40 \div 5 = 8 \end{cases}$

(c) $7 \times 4 = 28 \begin{cases} \rightarrow 28 \div 7 = 4 \\ \rightarrow 28 \div 4 = 7 \end{cases}$

Sol.3 (a) $56 \div 8 = 7 \begin{cases} \rightarrow 8 \times 7 = 56 \\ \rightarrow 7 \times 8 = 56 \end{cases}$

(b) $25 \div 5 = 5 \rightarrow 5 \times 5 = 25$

(c) $72 \div 8 = 9 \begin{cases} \rightarrow 8 \times 9 = 72 \\ \rightarrow 9 \times 8 = 72 \end{cases}$

Sol.4 (a) $217 \div 217 = 1$

(b) $0 \div 2075 = 0$

(c) $905 \div 905 = 1$

(d) $152 \div 1 = 152$

(e) $0 \div 888 = 0$

(f) $5260 \div 1 = 5260$

Concept Recap 6.2

Sol.1. (a)
$$\begin{array}{r} 8 \\ 4 \overline{)32} \\ -32 \\ \hline 0 \end{array}$$

Thus, $32 \div 4 = 8$

(b)
$$\begin{array}{r} 24 \\ 2 \overline{)48} \\ -4 \\ \hline 08 \\ -8 \\ \hline 0 \end{array}$$

Thus, $48 \div 2 = 24$

(c)
$$\begin{array}{r} 13 \\ 6 \overline{)78} \\ -6 \\ \hline 18 \\ -18 \\ \hline 0 \end{array}$$

Thus, $78 \div 6 = 13$

(d)
$$\begin{array}{r} 13 \\ 7 \overline{)91} \\ -7 \\ \hline 21 \\ -21 \\ \hline 0 \end{array}$$

Thus, $91 \div 7 = 13$

Sol.2. (a)
$$\begin{array}{r} 13 \\ 5 \overline{)68} \\ \underline{-5} \\ 18 \\ \underline{-15} \\ 3 \end{array}$$

∴ Quotient = 13, remainder = 3

Checking

Quotient × Divisor + Remainder

= 13 × 5 + 3

= 65 + 3 = 68 = Dividend

Thus, answer is correct.

(b)
$$\begin{array}{r} 14 \\ 4 \overline{)57} \\ \underline{-4} \\ 17 \\ \underline{-16} \\ 1 \end{array}$$

∴ Quotient = 14, remainder = 1

Checking

= 14 × 4 + 1 = 56 + 1 = 57 = Dividend

Thus, answer is correct.

(c)
$$\begin{array}{r} 15 \\ 5 \overline{)79} \\ \underline{-5} \\ 29 \\ \underline{-25} \\ 4 \end{array}$$

∴ Quotient = 15, remainder = 4

Checking

= 15 × 5 + 4 = 75 + 4 = 79 = Dividend

Thus, answer is correct.

(d)
$$\begin{array}{r} 11 \\ 7 \overline{)81} \\ \underline{-7} \\ 11 \\ \underline{-7} \\ 4 \end{array}$$

∴ Quotient = 11, remainder = 4

Checking

= 11 × 7 + 4 = 77 + 4 = 81 = Dividend

Thus, answer is correct.

Sol.3. Bottles in 3 crates = 63

Bottles in 1 crate = 63 ÷ 3 = 21

$$\begin{array}{r} 21 \\ 3 \overline{)63} \\ \underline{-6} \\ 03 \\ \underline{-3} \\ 0 \end{array}$$

Sol.4. Cost of pencils = ₹ 96

Cost of 1 pencil = ₹ 96 ÷ 8 = ₹ 12

$$\begin{array}{r} 12 \\ 8 \overline{)96} \\ \underline{-8} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

Sol.5. Total seats = 52

No. of rows = 52 ÷ 4

= 13

$$\begin{array}{r} 13 \\ 4 \overline{)52} \\ \underline{-4} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

Concept Recap 6.3

Sol.1. (a)
$$\begin{array}{r} 123 \\ 2 \overline{)246} \\ \underline{-2} \\ 4 \\ \underline{-4} \\ 6 \\ \underline{-6} \\ 0 \end{array}$$

(b)
$$\begin{array}{r} 102 \\ 3 \overline{)306} \\ \underline{-3} \\ 06 \\ \underline{-6} \\ 0 \end{array}$$

∴ Quotient = 123

∴ Quotient = 102

(c)
$$\begin{array}{r} 115 \\ 8 \overline{)920} \\ \underline{-8} \\ 12 \\ \underline{-8} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

∴ Quotient = 115

$$(d) \begin{array}{r} 121 \\ 7 \overline{)847} \\ \underline{-7} \\ 14 \\ \underline{-14} \\ 07 \\ \underline{-7} \\ 0 \end{array}$$

∴ Quotient = 121

$$\text{Sol.2. (a)} \begin{array}{r} 81 \\ 6 \overline{)487} \\ \underline{48} \\ 07 \\ \underline{-6} \\ 1 \end{array}$$

Quotient = 81
Remainder = 1

$$(b) \begin{array}{r} 53 \\ 9 \overline{)479} \\ \underline{-45} \\ 29 \\ \underline{-27} \\ 2 \end{array}$$

Quotient = 53
Remainder = 2

$$(c) \begin{array}{r} 68 \\ 9 \overline{)615} \\ \underline{-54} \\ 75 \\ \underline{-72} \\ 3 \end{array}$$

Quotient = 68
Remainder = 3

$$(d) \begin{array}{r} 106 \\ 8 \overline{)854} \\ \underline{-8} \\ 54 \\ \underline{-48} \\ 6 \end{array}$$

Quotient = 106
Remainder = 6

Sol.3. Total pictures = 560
Pictures on a page = 5
No. of pages required = $560 \div 5$
= 112

$$\begin{array}{r} 112 \\ 5 \overline{)560} \\ \underline{-5} \\ 6 \\ \underline{-5} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

Sol.4. Total eggs = 992
No. of customers = $992 \div 8$
= 124

$$\begin{array}{r} 124 \\ 8 \overline{)992} \\ \underline{-8} \\ 19 \\ \underline{-16} \\ 32 \\ \underline{-32} \\ 0 \end{array}$$

Sol.5. Total apples = 539
No. of boxes = 9
No. of apples in each box = $539 \div 9$
= 59

$$\begin{array}{r} 59 \\ 9 \overline{)539} \\ \underline{-45} \\ 89 \\ \underline{-81} \\ 8 \end{array}$$

Remaining apples = 8

Concept Recap 6.4

$$\text{Sol.1. (a)} \begin{array}{r} 1867 \\ 3 \overline{)5601} \\ \underline{-3} \\ 26 \\ \underline{-24} \\ 20 \\ \underline{-18} \\ 21 \\ \underline{-21} \\ 0 \end{array}$$

$$(b) \begin{array}{r} 1234 \\ 2 \overline{)2468} \\ \underline{-2} \\ 4 \\ \underline{-4} \\ 6 \\ \underline{-6} \\ 8 \\ \underline{-8} \\ 0 \end{array}$$

Quotient = 1867 Quotient = 1234

$$(c) \begin{array}{r} 1152 \\ 7 \overline{)8064} \\ \underline{-7} \\ 10 \\ \underline{-7} \\ 36 \\ \underline{-35} \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

$$(d) \begin{array}{r} 1234 \\ 8 \overline{)9872} \\ \underline{-8} \\ 18 \\ \underline{-16} \\ 27 \\ \underline{-24} \\ 32 \\ \underline{-32} \\ 0 \end{array}$$

Quotient = 1152 Quotient = 1234

Sol.2. (a)
$$\begin{array}{r} 1548 \\ 5 \overline{)7742} \\ \underline{-5} \\ 27 \\ \underline{-25} \\ 24 \\ \underline{-20} \\ 42 \\ \underline{-40} \\ 2 \end{array}$$

Quotient = 1548
Remainder = 2

(b)
$$\begin{array}{r} 2385 \\ 4 \overline{)9541} \\ \underline{-8} \\ 15 \\ \underline{-12} \\ 34 \\ \underline{-32} \\ 21 \\ \underline{-20} \\ 1 \end{array}$$

Quotient = 2385
Remainder = 1

(c)
$$\begin{array}{r} 1095 \\ 8 \overline{)8763} \\ \underline{-8} \\ 76 \\ \underline{-72} \\ 43 \\ \underline{-40} \\ 3 \end{array}$$

Quotient = 1095
Remainder = 3

(d)
$$\begin{array}{r} 836 \\ 9 \overline{)7525} \\ \underline{-72} \\ 32 \\ \underline{-27} \\ 55 \\ \underline{-54} \\ 1 \end{array}$$

Quotient = 836
Remainder = 1

- Sol.3.** (a) $80 \div 10$
Quotient = 8
Remainder = 0
(c) $371 \div 10$
Quotient = 37
Remainder = 1

- (b) $652 \div 10$
Quotient = 65
Remainder = 2
(d) $4516 \div 10$
Quotient = 451
Remainder = 6

- Sol.4.** Total people = 2865
No. of bogies = 5
No. of people in each bogie
= $2865 \div 5 = 573$

$$\begin{array}{r} 573 \\ 5 \overline{)2865} \\ \underline{-25} \\ 36 \\ \underline{-35} \\ 15 \\ \underline{-15} \\ 0 \end{array}$$

- Sol.5.** Total bulbs = 5288
No. of cartons = 7
No. of bulbs in each carton = $5288 \div 7 = 755$
Remaining bulbs = 3

$$\begin{array}{r} 755 \\ 7 \overline{)5288} \\ \underline{-49} \\ 38 \\ \underline{-35} \\ 38 \\ \underline{-35} \\ 3 \end{array}$$

Concept Recap 6.5

Teachers and students are advised to create word problems in their own words.

Interactive Practice

Sol.1. (a)
$$\begin{array}{r} 24 \\ \underline{-8} \\ 16 \\ \underline{-8} \\ 8 \\ \underline{-8} \\ 0 \end{array}$$

$24 \div 8 = 3$

(b)
$$\begin{array}{r} 27 \\ \underline{-9} \\ 18 \\ \underline{-9} \\ 9 \\ \underline{-9} \\ 0 \end{array}$$

$27 \div 9 = 3$

$$\begin{array}{r}
 (c) \quad 30 \\
 \underline{-5} \leftarrow \textcircled{1} \\
 25 \\
 \underline{-5} \leftarrow \textcircled{2} \\
 20 \\
 \underline{-5} \leftarrow \textcircled{3} \\
 15 \\
 \underline{-5} \leftarrow \textcircled{4} \\
 10 \\
 \underline{-5} \leftarrow \textcircled{5} \\
 5 \\
 \underline{-5} \leftarrow \textcircled{6} \\
 0
 \end{array}$$

$$30 \div 5 = 6$$

Sol.2. (a) $9 \times 2 = 18$ $\begin{cases} \rightarrow 18 \div 9 = 2 \\ \rightarrow 18 \div 2 = 9 \end{cases}$

(b) $7 \times 4 = 28$ $\begin{cases} \rightarrow 28 \div 7 = 4 \\ \rightarrow 28 \div 4 = 7 \end{cases}$

(c) $8 \times 5 = 40$ $\begin{cases} \rightarrow 40 \div 8 = 5 \\ \rightarrow 40 \div 5 = 8 \end{cases}$

Sol.3. (a) $21 \div 3 = 7$ $\begin{cases} \rightarrow 3 \times 7 = 21 \\ \rightarrow 7 \times 3 = 21 \end{cases}$

(b) $25 \div 5 = 5 \rightarrow 5 \times 5 = 25$

(c) $54 \div 6 = 9$ $\begin{cases} \rightarrow 6 \times 9 = 54 \\ \rightarrow 9 \times 6 = 54 \end{cases}$

Sol.4. (a)
$$\begin{array}{r}
 121 \\
 3 \overline{) 363} \\
 \underline{-3} \\
 6 \\
 \underline{-6} \\
 3 \\
 \underline{-3} \\
 0
 \end{array}$$

(b)
$$\begin{array}{r}
 102 \\
 4 \overline{) 408} \\
 \underline{-4} \\
 08 \\
 \underline{-8} \\
 0
 \end{array}$$

$$\therefore \text{Quotient} = 121$$

$$\therefore \text{Quotient} = 102$$

$$\begin{array}{r}
 1302 \\
 2 \overline{) 2604} \\
 \underline{-2} \\
 6 \\
 \underline{-6} \\
 04 \\
 \underline{-4} \\
 0
 \end{array}$$

$$\therefore \text{Quotient} = 1302$$

Sol.5. Total buttons = 72
Buttons on one shirt = 6
No. of shirts = $72 \div 6 = 12$

Sol.6. Total time = 36 minute
No. of Chapati = $36 \div 4 = 9$

Sol.7. Total books = 408
No. of books each bay will get = $408 \div 10$
= 40

and 8 books are left

Sol.8. Total amount = ₹ 4820
Cost of 1 book = ₹ 9
No. of books = ₹ $(4820 \div 9)$
= ₹ 535 and ₹ 5 are left.

Creative Corner

Sol. 1. $4 \times 2 \div 1 = 8$

2. $7 \times 4 \div 2 = 14$

3. $10 \div 5 \times 3 = 6$

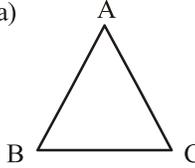
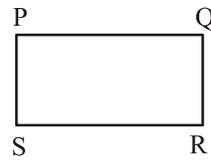
4. $15 \div 3 \times 2 = 10$

Chapter-7 Geometrical Shapes

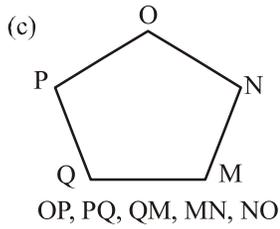
Concept Recap 7.1

Sol.1. $M \text{-----} N$
Line segment MN or \overline{MN} .

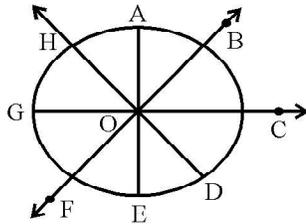
Sol.2. PQR

Sol.3. (a)  (b) 

AB, BC, CA PQ, QR, RS, SP

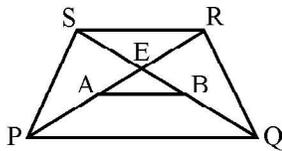


Sol.4.



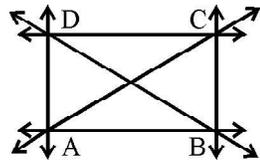
Rays = $\overrightarrow{GC}, \overrightarrow{DH}$
 Line Segment = \overline{AE}
 Line = \overleftrightarrow{BF}

Sol.5.



(a) E (b) B (c) E (d) S

Sol.6.

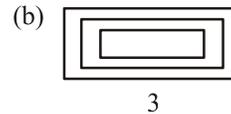
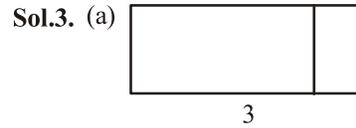
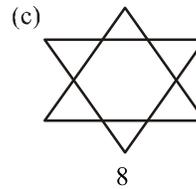
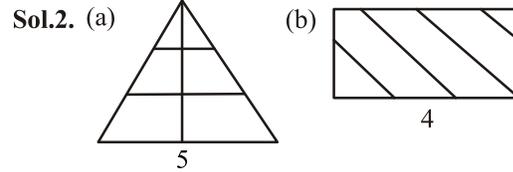
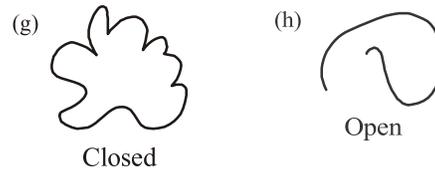
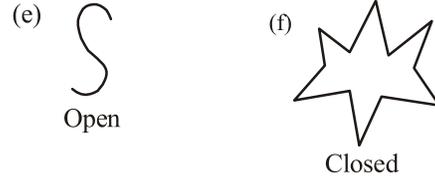
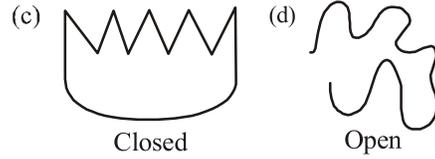
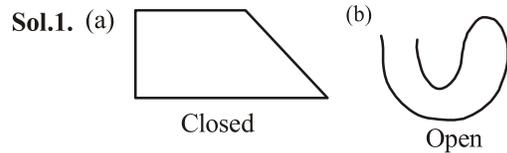


(a) DC, AB
 (b) $\overline{AD}, \overline{BC}$
 (c) $\overline{BD}, \overline{AC}$

Concept Recap 7.2

Sol.1. Do yourself

Concept Recap 7.3



- Sol.4. (a) A blackboard → rectangle
 (b) A page of the book → rectangle
 (c) A postcard → rectangle
 (d) The surface of the book → rectangle
 (e) The wheel of a bicycle → circle
 (f) A set-square in your geometry box → triangle

- Sol.5. (a) A triangle has 3 sides and 3 vertices.
 (b) A rectangle has 4 sides and 4 vertices.

- (c) The opposite sides of a rectangle are equal.
 (d) A circle has 0 sides and 0 vertices.

Sol.6.

S.No.	Solid	Number of faces	Number of Plane Face	Number of curved Face	Number of edges	Number of vertice
(a)	Cuboid	6	6	0	12	8
(b)	Cube	6	6	0	12	8
(c)	Cylinder	3	2	1	2	0
(d)	Cone	2	1	1	1	1

- Sol.7.** (a) Only curved surface = cricket ball, football
 (b) Only flat surfaces = tea packet, brick
 (c) Both plane and curved surface = funnel, battery cell

- Sol.8.** (a) Watermelon = sphere
 (b) Candle = cylinder
 (c) Sharpen pencil = cone

Concept Recap 7.4

Sol.1. 3, No

Sol.2. None

Sol.3. and **Sol.4.** Do yourself

Interactive practice

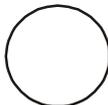
- Sol.1.** (a) Point: A point is a dot made by a pencil.
 (b) Line segment: A line segment is a part of a line.
 (c) Ray: A ray is a part of a line that has a fixed starting point but no end point.

Sol.2. P, Q, R, S

Sol.3. (a) Triangle



(c) Circle

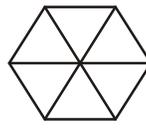


(b) Rectangle



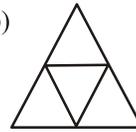
- Sol.4.** (a) A line segment has two end points.
 (b) A line has no end points.
 (c) A line segment has a definite length,
 (d) A line AB is represents by \overline{AB} .
 (e) A dot (.) represents a point.
 (f) A point shows a definite location.

Sol.5. (a)



6

(b)



5

- Sol.6.** (a) Funnel → Cone (b) Guava → Sphere
 (c) Battery cell → Cylinder
 (d) Garden roller → Cylinder

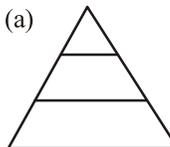
Creative Corner

Do yourself

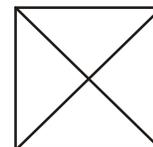
**Chapter-8
Fractions**

Concept Recap 8.1

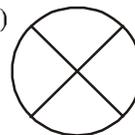
Sol.1. (a)



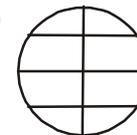
(b)



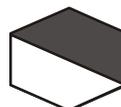
(c)



(d)



Sol.2. (a)



(b)



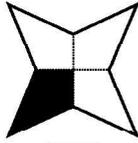
(c)



(d)



Sol.3. (a)



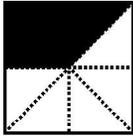
$$\frac{1}{4}$$

(b)



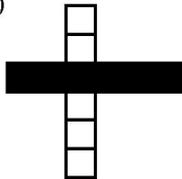
$$\frac{3}{4}$$

(c)



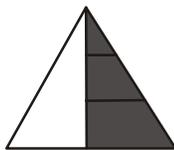
$$\frac{3}{8}$$

(d)



$$\frac{6}{11}$$

Sol.4. (a)



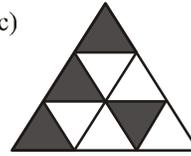
$$\frac{1}{2}$$

(b)



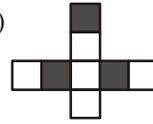
$$\frac{3}{8}$$

(c)



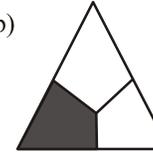
$$\frac{4}{9}$$

Sol.5. (a)



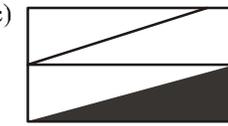
$$\frac{5}{8}$$

(b)



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

(c)



$$\frac{3}{4}$$

Sol.6. (a) one-eighth = $\frac{1}{8}$ (b) six-ninths = $\frac{6}{9}$

(c) nine-elevenths = $\frac{9}{11}$

Sol.7. (a) $\frac{5}{11}$ = five-elevenths

(b) $\frac{9}{10}$ = nine-tenths

(c) $\frac{7}{12}$ = seven-twelfths

(d) $\frac{5}{9}$ = five-ninths

Sol.8. (a) In $\frac{1}{7}$ = Numerator = 1, Deominator = 7

(b) In $\frac{7}{10}$ = Numerator = 7, Deominator = 10

(c) In $\frac{11}{24}$ = Numerator = 11, Deominator = 24

(d) In $\frac{10}{30}$ = Numerator = 10, Deominator = 30

Sol.9. (a) Numerator = 5, Deominator = 9, Fraction = $\frac{5}{9}$

(b) Numerator = 24, Deominator = 25, Fraction = $\frac{24}{25}$

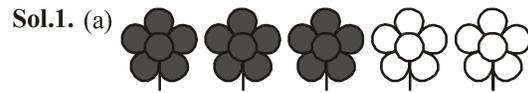
Sol.10. (a) In $\frac{10}{19}$, the numerator is 10.

(b) In $\frac{8}{25}$, the numerator is 8.

(c) In $\frac{13}{28}$, the numerator is 13.

(d) In $\frac{17}{39}$, the denominator is 39.

Concept Recap 8.2



Sol.2. (a) $\frac{1}{3}$ of 33 = $\frac{1 \times 33 = 33}{3} = 11$

(b) $\frac{1}{2}$ of 18 = $\frac{1 \times 18 = 18}{2} = 9$

(c) $\frac{1}{5}$ of 25 = $\frac{1 \times 25 = 25}{5} = 5$

(d) $\frac{1}{4}$ of 56 = $\frac{1 \times 56 = 56}{4} = 14$

(e) $\frac{1}{6}$ of 24 = $\frac{1 \times 24 = 24}{6} = 4$

(f) $\frac{1}{7}$ of 42 = $\frac{1 \times 42 = 42}{7} = 6$

Concept Recap 8.3

Sol.1. $\frac{3}{8}, \left(\frac{1}{4}\right), \frac{7}{2}, \left(\frac{1}{9}\right), \frac{29}{27}, \frac{5}{32}, \left(\frac{1}{10}\right), \left(\frac{1}{16}\right), \frac{6}{23}$

Sol.2. $\frac{14}{14}, \left(\frac{1}{10}\right), \left(\frac{6}{9}\right), \frac{18}{13}, \left(\frac{4}{8}\right), \frac{3}{2}, \left(\frac{5}{7}\right), \left(\frac{9}{11}\right), \frac{12}{10}$

Sol.3. $\frac{13}{28}, \left(\frac{21}{19}\right), \frac{10}{11}, \left(\frac{9}{5}\right), \left(\frac{18}{9}\right), \frac{1}{17}, \frac{5}{10}, \left(\frac{7}{2}\right), \left(\frac{17}{15}\right)$

Sol.4. (a) $\left(\frac{1}{3}\right), \frac{7}{11}, \left(\frac{4}{3}\right), \frac{1}{6}, \left(\frac{2}{3}\right), \frac{6}{5}, \left(\frac{7}{3}\right)$

(b) $\left(\frac{4}{11}\right), \frac{5}{10}, \left(\frac{2}{11}\right), \frac{6}{8}, \left(\frac{6}{11}\right), \frac{5}{6}, \left(\frac{7}{11}\right)$

Sol.5. (a) $\left(\frac{7}{9}\right), \frac{2}{9}, \frac{5}{9}$ (b) $\frac{5}{12}, \frac{3}{12}, \left(\frac{9}{12}\right)$

(c) $\frac{17}{25}, \frac{21}{25}, \left(\frac{23}{25}\right)$

Sol.6. (a) Ascending order is: $\frac{1}{8}, \frac{3}{8}, \frac{4}{8}, \frac{7}{8}$

(b) Ascending order is: $\frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{5}{6}$

(c) Ascending order is: $\frac{5}{14}, \frac{9}{14}, \frac{12}{14}, \frac{13}{14}$

Interactive Practice

Sol.1. (a) Quarter (one-fourth) = $\frac{1}{4}$

(b) Half = $\frac{1}{2}$

(c) Three-fourths = $\frac{3}{4}$

(d) One and a half = $1\frac{1}{2}$

Sol.2. (a) In $\frac{2}{7}$ = Numerator = 2, Deominator = 7

(b) In $\frac{5}{6}$ = Numerator = 5, Deominator = 6

(c) In $\frac{4}{9}$ = Numerator = 4, Deominator = 9

(d) In $\frac{7}{10}$ = Numerator = 7, Deominator = 10

Sol.3. (a) $\frac{1}{7}$ of 63 = $\frac{1 \times 63 = 63}{7} = 9$

(b) $\frac{1}{8}$ of 64 = $\frac{1 \times 64 = 64}{8} = 8$

(c) $\frac{1}{9}$ of 81 = $\frac{1 \times 81 = 81}{9} = 9$

Sol.4. (a) $\frac{3}{9} < \frac{5}{9}$ (b) $\frac{2}{5} < \frac{3}{5}$

(c) $\frac{5}{9} > \frac{1}{9}$

Sol.5. Total balls = 18

$$\text{Red balls} = 18 \times \frac{1}{2} = \frac{18}{2} = 9$$

$$\text{Blue balls} = 18 \times \frac{1}{3} = \frac{18}{3} = 6$$

$$\text{Yellow balls} = 18 - (9 + 6)$$

$$= 18 - 15$$

$$= 3$$

There are 3 yellow balls.

Sol.6. Do yourself

Creative Corner

Do yourself

Chapter-9 Measurement

Concept Recap 9.1

Sol.1. (a) The standard unit for measuring length is metre.

(b) Kilometre is the unit for measuring longer lengths.

(c) Distance from Delhi to Ghaziabad will be measured in kilometre.

Sol.2. (a) $33 \text{ m} = 33 \times 100 \text{ cm} = 3300 \text{ cm}$

(b) $66 \text{ m} = 66 \times 100 \text{ cm} = 6600 \text{ cm}$

(c) $87 \text{ m} = 87 \times 100 \text{ cm} = 8700 \text{ cm}$

Sol.3. (a) $800 \text{ cm} = (800 \div 100) \text{ m} = 8 \text{ m}$

(b) $6410 \text{ cm} = 6400 \text{ cm} + 10 \text{ cm}$
 $= (6400 \div 100) \text{ m} + 10 \text{ cm}$
 $= 64 \text{ m} + 10 \text{ cm} = 64 \text{ m } 10 \text{ cm}$
 $= 64 \text{ m } 10 \text{ cm}$

(c) $6504 \text{ cm} = 6500 \text{ cm} + 4 \text{ cm}$
 $= (6500 \div 100) \text{ m} + 4 \text{ cm}$
 $= 65 \text{ m} + 4 \text{ cm} = 65 \text{ m } 4 \text{ cm}$

Sol.4. (a) $5 \text{ km} = 5 \times 1000 \text{ m} = 5000 \text{ m}$

(b) $2 \text{ km } 8 \text{ m} = 2 \times 1000 \text{ m} + 8 \text{ m}$
 $= 2000 \text{ m} + 8 \text{ m} = 2085 \text{ m}$

(c) $4 \text{ km } 560 \text{ m} = 4 \times 1000 \text{ m} + 560 \text{ m}$
 $= 4000 \text{ m} + 560 \text{ m} = 4560 \text{ m}$

Sol.5. (a) $8000 \text{ m} = (8000 \div 1000) \text{ km} = 8 \text{ km}$

(b) $6985 \text{ m} = 6000 \text{ m} + 985 \text{ m}$
 $= (6000 \div 1000) \text{ km} + 985 \text{ m}$
 $= 6 \text{ km } 985 \text{ m}$

(c) $1050 \text{ m} = 1000 \text{ m} + 50 \text{ m}$

$$= 1 \text{ km} + 50 \text{ m}$$

$$= 1 \text{ km } 50 \text{ m}$$

Concept Recap 9.2

Sol.1. (a) m cm

$$\begin{array}{r} 26 \quad 25 \\ + 18 \quad 34 \\ \hline 44 \quad 59 \end{array}$$

(b) km m

$$\begin{array}{r} 340 \quad 002 \\ + 438 \quad 104 \\ \hline 778 \quad 106 \end{array}$$

Sol.2. (a) m cm

$$\begin{array}{r} 420 \quad 82 \\ + 94 \quad 10 \\ \hline 514 \quad 92 \end{array}$$

(c) km cm

$$\begin{array}{r} 29 \quad 56 \\ + 27 \quad 08 \\ \hline 56 \quad 64 \end{array}$$

Sol.3. (a) m cm

$$\begin{array}{r} 89 \quad 57 \\ - 23 \quad 73 \\ \hline 65 \quad 84 \end{array}$$

(c) km m

$$\begin{array}{r} 126 \quad 265 \\ - 117 \quad 564 \\ \hline 008 \quad 701 \end{array}$$

Sol.4. (a) m cm

$$\begin{array}{r} 2 \quad 46 \\ - \quad 78 \\ \hline 1 \quad 68 \end{array}$$

(c) m cm

$$\begin{array}{r} 625 \quad 27 \\ - 472 \quad 52 \\ \hline 152 \quad 75 \end{array}$$

(c) km m

$$\begin{array}{r} 278 \quad 305 \\ + 192 \quad 930 \\ \hline 471 \quad 235 \end{array}$$

(b) m cm

$$\begin{array}{r} 254 \quad 28 \\ + 210 \quad 47 \\ \hline 464 \quad 75 \end{array}$$

(d) km m

$$\begin{array}{r} 149 \quad 644 \\ + 110 \quad 090 \\ \hline 259 \quad 734 \end{array}$$

(b) km m

$$\begin{array}{r} 28 \quad 305 \\ - 19 \quad 216 \\ \hline 09 \quad 089 \end{array}$$

Concept Recap. 9.3

km m

Sol.1. Distance covered by train = 4 8 7 8 4

Distance covered by car = + 8 6 6 8 5

Total distance covered = 1 3 5 4 6 9

$$= \underline{135 \text{ km } 469 \text{ m}}$$

m cm

Sol.2. Length of first piece = 2 2 7 6

Length of second piece = + 3 4 2 7

Total length = 5 7 0 3

$$= 57 \text{ m } 3 \text{ cm}$$

Sol.3. 201 km 700 m > 154 km 100 m

$$\begin{array}{r} \text{km} \quad \text{m} \\ 201 \quad 700 \\ -154 \quad 100 \\ \hline \text{Difference} = 47 \quad 600 \end{array}$$

Thus, the distance between Agra and Delhi is greater than the distance between Jaipur and Delhi by 47 km 600 m.

Sol.4. Cloth given to the tailor:

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 8 \quad 35 \\ 6 \quad 65 \\ + 4 \quad 45 \\ \hline 19 \quad 45 \end{array}$$

= 19 m 45 m

Cloth left with Tanvay :

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 26 \quad 00 \\ -19 \quad 45 \\ \hline 6 \quad 55 \end{array}$$

= 6 m 55 cm

Concept Recap 9.4

Sol.1. (a) tomato — g (b) cricket ball — g
(c) a loaf of bread — g (d) pumpkin — kg

Sol.2. (a) 12 kg = 12 × 1000 g = 12000 g

(b) 8 kg 750 g = 8 × 1000 g + 750 g = 8000 g + 750 g = 8750 g

(c) 20 kg 900 g = 20 × 1000 g + 900 g
= 20000 g + 900 g = 20900 g

(d) 2 kg 973 g = 2 × 1000 g + 973 g = 2000 g + 973 g
= 2973 g

Sol.3. (a) 8000 g = (8000 ÷ 1000) kg = 8 kg

(b) 8900 g = 8000 g + 900 g = (8000 ÷ 1000) kg + 900 g = 8 kg 900 g

(c) 7500 g = 7000 g + 500 g = 7 kg 500 g

(d) 9089 g = 9000 g + 89 g = 9 kg 89 g

Concept Recap 9.5

$$\begin{array}{r} \text{kg} \quad \text{g} \quad \text{(b)} \quad \text{kg} \quad \text{g} \\ 24 \quad 588 \quad 734 \quad 507 \\ + 12 \quad 847 \quad + 87 \quad 287 \\ \hline 37 \quad 435 \quad 46 \quad 854 \\ \hline 868 \quad 648 \end{array}$$

= 37 kg 435 g

= 43 kg 600 g

(c)
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 226 \quad 080 \\ + 18 \quad 992 \\ \hline 207 \quad 088 \end{array}$$

= 207 kg 88 g

Sol.2. (a)
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 8 \quad 396 \\ 4 \quad 847 \\ + 7 \quad 078 \\ \hline 20 \quad 321 \end{array}$$

= 20 kg 321 g

(c)
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 25 \quad 003 \\ -14 \quad 859 \\ \hline 10 \quad 144 \end{array}$$

= 10 kg 144 g

(b)
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 8 \quad 874 \\ + 9 \quad 504 \\ \hline 4 \quad 007 \end{array}$$

= 22 kg 385 g

(d)
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 45 \quad 004 \\ -23 \quad 359 \\ \hline 21 \quad 645 \end{array}$$

= 21 kg 645 g

Concept Recap 9.6

Sol.1. Weight of first boy =
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 36 \quad 850 \end{array}$$

Weight of second boy =
$$\begin{array}{r} + 32 \quad 500 \end{array}$$

Total weight =
$$\begin{array}{r} 69 \quad 350 \end{array}$$

= 69 kg 350 g

Sol.2. Weight of flour =
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 45 \quad 280 \end{array}$$

Weight of vegetables =
$$\begin{array}{r} + 14 \quad 950 \end{array}$$

Total weight =
$$\begin{array}{r} 60 \quad 230 \end{array}$$

= 60 kg 230 g

Sol.3. Weight of pulses =
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 5 \quad 500 \end{array}$$

Weight of sugar =
$$\begin{array}{r} + 3 \quad 250 \end{array}$$

Total weight =
$$\begin{array}{r} 8 \quad 750 \end{array}$$

= 8 kg 750 g

Sol.4. Weight of fruits =
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 75 \quad 500 \end{array}$$

Fruits sold =
$$\begin{array}{r} - 48 \quad 750 \end{array}$$

Fruits left =
$$\begin{array}{r} 26 \quad 750 \end{array}$$

= 26 kg 750 g

Concept Recap 9.7

Sol.1. (a) A glass of milk mL

(b) Diesel filled in a car L

(c) A sochet of ketchup mL

(d) Medicine in a syringe mL

Sol.2. (a) 9 L = 9 × 1000 mL = 9000 mL

(b) 6 L 200 mL = 6 × 1000 mL + 200 mL
= 6000 mL + 200 mL = 6200 mL

(c) 42 L 495 mL = 42 × 1000 mL + 495 mL
= 42000 mL + 495 mL
= 42495 mL

$$\begin{aligned} \text{(d) } 28 \text{ L } 405 \text{ mL} &= 28 \times 1000 \text{ mL} + 405 \text{ mL} \\ &= 28000 \text{ mL} + 405 \text{ mL} \\ &= 28405 \text{ mL} \end{aligned}$$

- Sol.3.** (a) $2000 \text{ mL} = (2000 \div 1000) \text{ L} = 2 \text{ L}$
 (b) $2090 \text{ mL} = 2000 \text{ mL} + 90 \text{ mL} = 2 \text{ L } 90 \text{ mL}$
 (c) $9089 \text{ mL} = 9000 \text{ mL} + 89 \text{ mL} = 9 \text{ L } 89 \text{ mL}$
 (d) $9765 \text{ mL} = 9000 \text{ mL} + 765 \text{ mL} = 9 \text{ L } 765 \text{ mL}$

Concept Recap 9.8

Sol.1. (a)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 61 \quad 752 \\ + 91 \quad 628 \\ \hline 153 \quad 380 \\ = 153 \text{ L } 380 \text{ mL} \end{array}$$

(b)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 26 \quad 275 \\ + 19 \quad 596 \\ \hline 45 \quad 871 \\ = 45 \text{ L } 871 \text{ mL} \end{array}$$

(c)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 498 \quad 433 \\ - 179 \quad 382 \\ \hline 319 \quad 051 \\ = 319 \text{ L } 051 \text{ mL} \end{array}$$

Sol.2. (a)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 17 \quad 627 \\ 9 \quad 437 \\ + 14 \quad 909 \\ \hline 41 \quad 973 \\ = 41 \text{ L } 973 \text{ mL} \end{array}$$

(b)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 31 \quad 000 \\ 72 \quad 000 \\ 108 \quad 000 \\ + 1 \quad 479 \\ \hline 222 \quad 479 \\ = 222 \text{ L } 479 \text{ mL} \end{array}$$

(c)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 96 \quad 275 \\ - 46 \quad 520 \\ \hline 49 \quad 755 \\ = 49 \text{ L } 755 \text{ mL} \end{array}$$

(d)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 230 \quad 015 \\ - 92 \quad 142 \\ \hline 137 \quad 873 \\ = 137 \text{ L } 873 \text{ mL} \end{array}$$

Concept Recap 9.9

Sol.1.
$$\begin{array}{r} \text{L} \quad \text{mL} \\ \text{Water in the bucket} = 8 \quad 425 \\ \text{Water added to the bucket} = + 2 \quad 786 \\ \hline \text{Total water} = 11 \quad 211 \\ = 11 \text{ L } 211 \text{ mL} \end{array}$$

Sol.2.
$$\begin{array}{r} \text{L} \quad \text{mL} \\ \text{Milk bought from one source} = 19 \quad 750 \\ \text{Milk bought from other source} = + 25 \quad 525 \\ \hline \text{Total milk} = 45 \quad 275 \\ = 45 \text{ L } 275 \text{ mL} \end{array}$$

Sol.3.
$$\begin{array}{r} \text{L} \quad \text{mL} \\ \text{Total juice} = 95 \quad 600 \\ \text{Juice sold} = - 38 \quad 850 \\ \hline \text{Juice left} = 56 \quad 750 \\ = 56 \text{ L } 750 \text{ mL} \end{array}$$

Sol.4.
$$\begin{array}{r} \text{L} \quad \text{mL} \\ \text{Refined oil sold} = 22 \text{ L } 80 \text{ mL} + 21 \text{ L } 850 \text{ mL} + 13 \text{ L } 350 \text{ mL} = \\ 22 \quad 080 \\ 21 \quad 850 \\ + 13 \quad 350 \\ \hline 57 \quad 280 \end{array}$$

$$\begin{array}{r} \text{L} \quad \text{mL} \\ \text{Total oil} = 80 \quad 000 \\ \text{Oil sold} = - 57 \quad 280 \\ \hline \text{Oil left} = 22 \quad 720 \\ = 22 \text{ L } 720 \text{ mL} \end{array}$$

Interactive Practice

- Sol.1.** (a) Water in mug = 300 mL
 (b) Height of a building = 10 m
 (c) Weight of shoes = 750 g

Sol.2. (a)
$$\begin{array}{r} \text{kg} \quad \text{g} \\ 45 \quad 209 \\ + 92 \quad 956 \\ \hline 138 \quad 165 \\ = 138 \text{ kg } 165 \text{ g} \end{array}$$

(b)
$$\begin{array}{r} \text{L} \quad \text{mL} \\ 350 \quad 807 \\ - 89 \quad 925 \\ \hline 260 \quad 882 \\ = 260 \text{ L } 882 \text{ mL} \end{array}$$

- Sol.3.** (a) $1 \text{ km } 60 \text{ m} = 1000 \text{ m} + 60 \text{ m} = 1060 \text{ m}$
 $1060 \text{ m} < 1160 \text{ m}$
 (b) $8 \text{ km } 880 \text{ m} = 8000 \text{ m} + 880 \text{ m} = 8880 \text{ m}$
 $8880 \text{ m} > 8808 \text{ m}$
 (c) $6 \text{ km } 66 \text{ m} = 6000 \text{ m} + 66 \text{ m} = 6066 \text{ m}$
 $6066 \text{ m} = 6066 \text{ m}$
 (d) $20 \text{ m } 50 \text{ cm} = 2000 \text{ cm} + 50 \text{ cm} = 2050 \text{ cm}$
 $2050 \text{ cm} < 2250 \text{ cm}$
 (e) $3 \text{ km } 47 \text{ m} = 3000 \text{ m} + 47 \text{ m} = 3047 \text{ m}$
 $3047 \text{ cm} < 3370 \text{ m}$
 (f) $8 \text{ m } 90 \text{ cm} = 800 \text{ cm} + 90 \text{ cm} = 890 \text{ cm}$
 $890 \text{ cm} < 897 \text{ cm}$

Sol.4.
$$\begin{array}{r} \text{km} \quad \text{m} \\ \text{Distance covered by train} = 48 \quad 784 \\ \text{Distance covered by car} = + 86 \quad 685 \\ \hline \text{Total distance} = 135 \quad 469 \\ = 135 \text{ km } 469 \text{ m} \end{array}$$

	kg	g	
Sol.5. Weight of wheat	=	8	650
Weight of tea	= +	5	476
Weight of wheat and tea	=	14	126
		kg	g
Total weight	=	27	000
Weight of wheat and tea	= -	14	126
Weight of rice	=	12	874
		= 12 kg 874 g	
		L	mL
Sol.6. Milk used for tea	=	6	225
Milk used for cheese	=	4	080
Milk used taken by child	= +	0	899
Milk used	=	11	204
		= 11 L 204 mL	
		L	mL
Total milk	=	13	850
Milk used	= -	11	204
Milk used for cure	=	2	646
		= 2 L 646 mL	

Creative Corner
Do yourself

Chapter-10 Time

Concept Recap 10.1

Sol.1. (a) 	(b) 
3 : 30 Half past 3	8 : 30 Half Past 8
(c) 	
5 : 30 Half past 5	
Sol.2. (a) 	(b) 
01 : 30	04 : 30
(c) 	
06 : 30	

Concept Recap 10.2

Sol.1. (a) 	(b) 
4 : 15 Quarter Past 4	1 : 15 Quarter Past 1
(c) 	
11 : 15 Quarter Past 11	
Sol.2. (a) 	(b) 
02 : 15	07 : 15
(c) 	
05 : 15	

Concept Recap 10.3

Sol.1. (a) 	(b) 
02 : 45 Quarter to 3	07 : 45 Quarter to 8
(c) 	
04 : 45 Quarter to 5	
Sol.2. (a) 	(b) 
06 : 45	07 : 45
(c) 	
09 : 45	

Concept Recap 10.4

Sol.1. 7:15 in the morning = 7:15 A.M.

Sol.2. 4:20 in the evening = 4:20 P.M.

Sol.3. 11:55 before noon = 11:55 A.M.

Sol.4. 12:05 afternoon = 12:05 P.M.

Concept Recap 10.5

Sol.1. (a)



02 : 55

5 minutes to 3

(b)



07 : 20

20 minutes past 7

(c)



08 : 35

35 minutes past 8

09 : 10

Sol.2. (a)



02 : 40

20 minutes to 3

(b)



04 : 35

25 minutes to 5

(c)



10 : 55

5 minutes to 11

Concept Recap 10.6

Sol.1. (a) 9 hours = 9×60 minutes = 540 minutes

(b) 8 hours 20 minutes
= 8×60 minutes + 20 minutes
= 480 minutes + 20 minutes
= 500 minutes

(c) 12 hours 35 minutes
= 12×60 minutes + 35 minutes
= 720 minutes + 35 minutes
= 755 minutes

Sol.2. (a) 300 minutes = $\frac{300}{60}$ hours = 5 hours

(b) 400 minutes = $\frac{400}{60}$ hours = 6 hours 40 minutes

(c) 420 minutes = $\frac{420}{60}$ hours = 7 hours

Sol.3. 2 hours 10 minutes = 2×60 minutes + 10 minutes
= 120 minutes + 10 minutes = 130 minutes
Thus, my mother spent 130 minutes in the market.

Sol.4. Robin takes 245 minutes.

Divya takes = 3 hours 15 minutes
= 3×60 minutes + 15 minutes
= 180 minutes + 15 minutes
= 195 minutes

Since, $195 < 245$ that means Divya takes less time.
Thus, Divya travelled faster.

Concept Recap 10.7

Sol.1. (a) 6 weeks = 6×7 days = 42 days

(b) 8 months 20 days = 8×30 days + 20 days
= 240 days + 20 days = 260 days

(c) 11 months 15 days = 11×30 days + 15 days
= 330 days + 15 days = 345 days

Sol.2. (a) 6 years = 6×12 months = 72 months

(b) 7 years 6 months = 7×12 months + 6 months
= 84 months + 6 months
= 90 months

(c) 10 years 10 months
= $(10 \times 12 + 10)$ months
= $(120 + 10)$ months
= 130 months

Sol.3. (a) 3 years = 3×365 days = 1095 days

(b) 4 years 150 days = 4×365 days + 150 days
= 1460 days + 150 days
= 1610 days

(c) 9 years 200 days = 9×365 days + 200 days
= 3285 days + 200 days
= 3485 days

Sol.4. (a) 11 days = 11×24 hours = 264 hours

(b) 20 days 4 hours = 20×24 hours + 4 hours
= 480 hours + 4 hours
= 484 hours

(c) 17 days 6 hours = 17×24 hours + 6 hours
= 408 hours + 6 hours
= 414 hours

Interactive Practice

Sol.1. (a)



06 : 40 o'clock

(b)



07 : 00 o'clock

(c)



06 : 00 o'clock

(d)



02 : 45 o'clock

(e)



02 : 30 o'clock

Sol.2. (a) The minute hand takes 15 minutes to move from 5 to 8.

(b) When the time is quarter past an hour, the minute hand is always at 3.

Sol.3. (a) Half past 8 is written as 8:15. False

(b) The minute hand moves from 1 to 3 in 10 minutes. True

Sol.4. (a) 8 o'clock in the morning 8:00. A.M.

(b) 11 o'clock before noon 11:00 A.M.

(c) 4:05 after midnight 4:05 A.M.

(d) 5:15 in the evening 5:15 P.M.

Sol.5. (a) 12 hours = 12×60 minutes = 720 minutes

(b) 2 days = 2×24 hours = 48×60 minutes = 2880 minutes

(c) 7 hours and 25 minutes = $(7 \times 60 + 25)$ minutes = 445 minutes

(d) 49 hours and 10 minutes = $(49 \times 60 + 10)$ minutes = 2950 minutes

Sol.6. 5 : 45

+ 45

5 : 90 minutes

5 : (60 + 30) minutes

5 : = 1 h 30 min

= 6 h 30 minutes

Thus, at 6 : 30 Ram is ready for school.

Sol.7. 3 : 15 P.M.

+ 2 : 10

5 : 25 P.M.

Thus, the movie finish at 5:25 P.M.

Sol.8. 9 : 05 P.M.

+ 0 : 20

9 : 25 P.M.

Thus, the news finish at 9:25 P.M.

Sol.9. Do yourself

Sol.10. Hours from 5 A.M. to 12 P.M. = 7 hours

Hours from 12 P.M. to 11 P.M. = 11 hours

Total time taken = (7 + 11) hours

= 18 hours

Creative Corner

Do yourself

Chapter-11 Money

Concept Recap. 11.1

Sol.1. 7 rupees

Sol.2. 8 rupees

Sol.3. 118 rupees

Sol.4. 255 rupees

Concept Recap. 11.2

Sol.1. (a) 55 paise = fifty-five paise

(b) 5 rupees 6 paise = Rupees five and six paise

(c) 1007 rupees 20 paise = Rupees one thousand seven and twenty paise

Sol.2. (a) Fifty rupees and thirty paise = ₹ 50.30

(b) Sixty-nine rupees and fifty paise = ₹ 69.50

Sol.3. (a) 63 rupees and 75 paise = ₹ 63.75

(b) 510 rupees and 20 paise = ₹ 510.20

Sol.4. (a) ₹ 8.36 = Eight rupees and thirty six paise

(b) ₹ 18.05 = Eighteen rupees and five paise

(c) ₹ 69.50 = Sixty-nine rupees and fifty paise

(d) ₹ 62.35 = Sixty-two rupees and thirty-five paise

Concept Recap 11.3

Sol.1. (a) ₹ 6 = 600 p (b) ₹ 20 = 2000 p

(c) ₹ 7.80 = 780 p (d) ₹ 8.40 = 840 p

(e) ₹ 26.90 = 2690 p (f) ₹ 6.75 = 675 p

(g) ₹ 4 = 400 p (h) ₹ 46.50 = 4650 p

Sol.2. (a) 8005 p = ₹ 80.05 = 80 rupees and 5 paise

(b) 153 p = ₹ 1.53 = 1 rupees and 53 paise

(c) 260 p = ₹ 2.60 = 2 rupees and 60 paise

(d) 1640 p = ₹ 16.40 = 16 rupees and 40 paise

(e) 4010 p = ₹ 40.10 = 40 rupees and 10 paise

(f) 2020 p = ₹ 20.20 = 20 rupees and 20 paise

Concept Recap 11.4

- Sol.1.** (a) 49 rupees 75 paise = 4975 paise
 + 9 rupees 65 paise = + 965 paise
 = 5940 paise
 = 59 rupees 40 paise
- (b) 64 rupees 6 paise = 6406 paise
 36 rupees 9 paise = + 3609 paise
 = 10015 paise
 = 100 rupees 15 paise

Sol.2. (a) ₹ P

$$\begin{array}{r} 53.65 \\ + 39.78 \\ \hline 93.43 \end{array}$$

(c) ₹ P

$$\begin{array}{r} 100.00 \\ - 74.65 \\ \hline 25.35 \end{array}$$

Sol.3. (a) ₹ 63.75

$$\begin{array}{r} ₹ 75.05 \\ + ₹ 52.80 \\ \hline ₹ 195.60 \end{array}$$

(c) ₹ 218.34

$$\begin{array}{r} - ₹ 91.76 \\ \hline ₹ 126.58 \end{array}$$

Sol.4. (a) 37 rupees 40 paise = 3740 paise

$$\begin{array}{r} 29 \text{ rupees } 85 \text{ paise} = - 2985 \text{ paise} \\ = 755 \text{ paise} \\ = 7 \text{ rupees } 55 \text{ paise} \end{array}$$

(b) 200 rupees 5 paise = 20005 paise

$$\begin{array}{r} 68 \text{ rupees } 36 \text{ paise} = - 6836 \text{ paise} \\ = \underline{13169 \text{ paise}} \\ = 131 \text{ rupees } 69 \text{ paise} \end{array}$$

Concept Recap 11.5**Sol.1.** Cost of pencil = ₹ 18.50

$$\begin{array}{r} \text{Cost of pen} = + ₹ 7.75 \\ \text{Total cost} = \underline{₹ 26.25} \end{array}$$

Thus, Sakshi needs ₹ 26.25.

Sol.2. Cost of doll = ₹ 85.50

$$\begin{array}{r} \text{Cost of dream} = + ₹ 117.75 \\ \text{Total cost} = \underline{₹ 203.25} \end{array}$$

Thus, Minu spend ₹ 203.25.

Sol.3. Cost of book = ₹ 15.88

Cost of stickers = ₹ 8.50

Cost of pencil = + ₹ 5.50

Total cost = ₹ 29.88

Thus, Tintin spend ₹ 29.88.

Sol.4. Money from mother = ₹ 101.50

Money from sister = + ₹ 98.75

Total money = ₹ 200.25

Thus, pinky gets ₹ 200.25.

Sol.5. Earning = ₹ 82.00

Expenditure = - ₹ 36.50

Saving = ₹ 45.50

Thus, Rohan saved ₹ 45.50.

Concept Recap 11.6**Sol.1.** (a) 16.30

$$\begin{array}{r} \times 2 \\ \hline 32.60 \end{array}$$

(c) 173.44

$$\begin{array}{r} \times 9 \\ \hline 1560.96 \end{array}$$

(b) 266.43

$$\begin{array}{r} \times 8 \\ \hline 2131.44 \end{array}$$

(d) 200.40

$$\begin{array}{r} \times 10 \\ \hline 2004.00 \end{array}$$

Sol.2. Cost of 1 bat = ₹ 54.65

$$\begin{array}{r} \text{Cost of 8 bats} = ₹ 54.65 \times 8 \\ = ₹ 437.20 \end{array}$$

Sol.3. Cost of 1 packet of pens = ₹ 88.50

$$\begin{array}{r} \text{Cost of 7 packets of pens} = ₹ 88.50 \times 7 \\ = ₹ 619.50 \end{array}$$

$$\begin{array}{r} 88.50 \\ \times 7 \\ \hline 619.50 \end{array}$$

Sol.4. Cost of 1 pair of shoes = ₹ 536.95

$$\begin{array}{r} \text{Cost of 3 pairs of shoes} = ₹ 536.95 \times 3 \\ = ₹ 1610.85 \end{array}$$

$$\begin{array}{r} 536.95 \\ \times 3 \\ \hline 1610.85 \end{array}$$

Sol.5. Cost of 6 bedsheets = ₹ 3150

$$\begin{array}{r} \text{Cost of 1 bedsheet} = ₹ 3150 \div 6 \\ = ₹ 525 \end{array}$$

$$\begin{array}{r}
 \text{Difference: ₹ 500} \\
 - \text{ ₹ 430} \\
 \hline
 \text{ ₹ 70}
 \end{array}$$

Thus, they need ₹ 70.

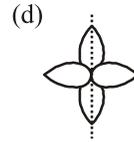
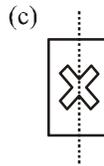
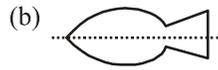
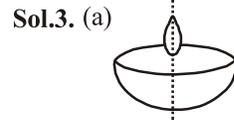
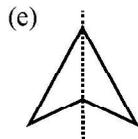
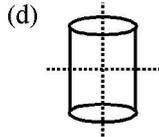
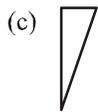
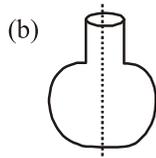
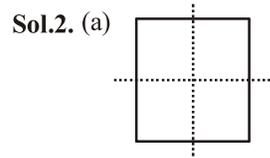
Sol.10. Cost of 1 packet of eraser = ₹ 50.50
 Cost of 12 packets of eraser = ₹ 50.50×12
 = ₹ 606.00

Creative Corner
 Do yourself

Chapter-12 Symmetry And Patterns

Concept Recap 12.1

Sol.1. (a) No (b) No (c) Yes (d) No
 (e) Yes

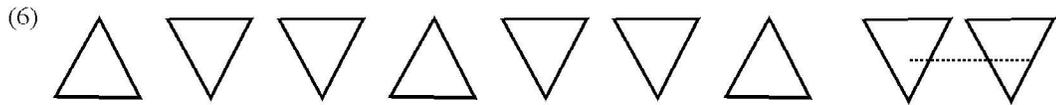
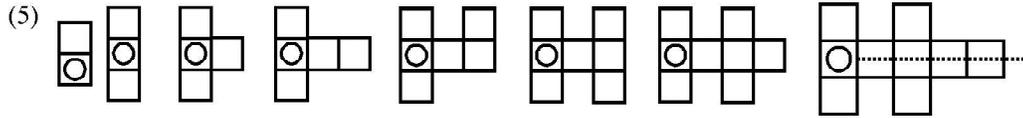


Test Prep. 12.2

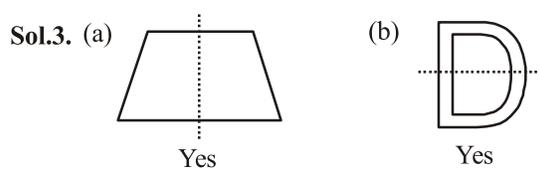
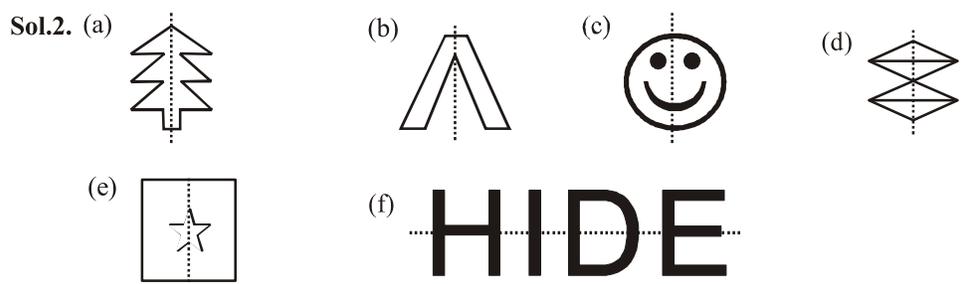
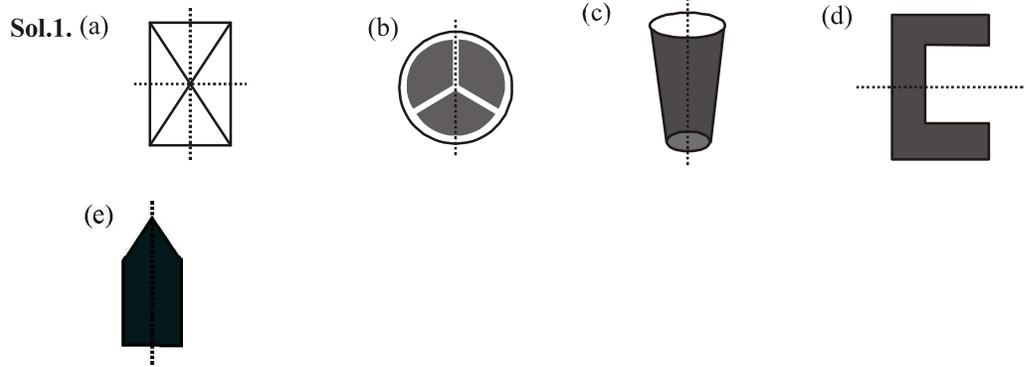
Do yourself.

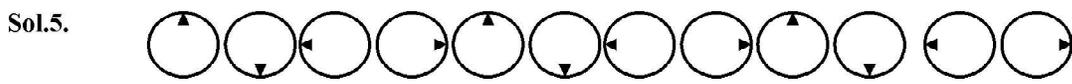
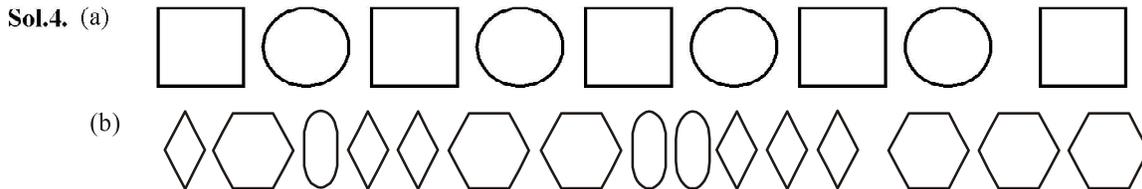
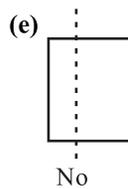
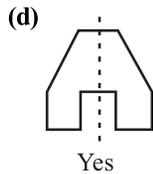
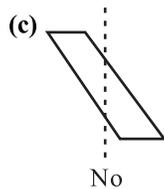
Concept Recap 12.3

- Sol.1.** (1) 3, 6, 9, 12, 15, 18, 21.
 (2) 12, 14, 16, 18, 20, 22, 24.
 (3) 38, 47, 56, 65, 74, 83, 92.
 (4) 360, 350, 340, 330, 320, 310, 300.



Interactive Practice





- Sol.6.** (a) 1, 3, 5, 7, 9, 11, 13, 15
 (b) 2, 4, 6, 8, 10, 12, 14, 16
 (c) 11, 22, 33, 44, 55, 66, 77
 (d) 24, 34, 44, 54, 64, 74, 84

Chapter-13 Area and Perimeter

Concept Recap 13.1

Sol.1. (a) → (ii), (b) → (i), (c) → (vi), (d) → (v),
 (e) → (iv), (f) → (iii)

Sol.2. (a) 12 (b) 8 (c) 7 (d) 9 (e) 14 (f) 6

Concept Recap 13.2

- Sol.1.** (a) Given, $l = 4$ cm and $b = 3$ cm
 $Area = l \times b = 4 \times 3$ sq.cm = 12 sq.cm
 (b) Given, $l = 11$ cm and $b = 4$ cm
 $Area = l \times b = 11 \times 4$ sq.cm = 44 sq.cm
 (c) Given, $l = 12$ cm and $b = 5$ cm
 $Area = l \times b = 12 \times 5$ sq.cm = 60 sq.cm
 (d) Given, $l = 8$ cm and $b = 8$ cm
 $Area = l \times b = 8 \times 8$ sq.cm = 64 sq.cm

Sol.2. For Manav's Field

Given, $l = 25$ m and $b = 16$ m
 $Area = l \times b = 25 \times 16$ sq.m = 400 sq.m

For Manasi's Field

Given, $l = 50$ m and $b = 40$ m
 $Area = l \times b = 50 \times 40$ sq.m = 2000 sq.m
 Since, $2000 > 400$
 Thus, area of Manasi's field is larger.

Sol.3. (a) Given, area = 16 sq.cm and $b = 2$ cm
 $Area = l \times b$

$$So, l = \frac{Area}{b} = \frac{16}{2} \text{ cm} = 8 \text{ cm}$$

(b) Given, area = 24 sq.cm and $l = 6$ cm
 $Area = l \times b$

$$So, b = \frac{Area}{l} = \frac{24}{6} \text{ cm} = 4 \text{ cm}$$

Sol.4. Given, $l = 24$ m and $b = 10$ m
 $Area = l \times b = 24 \times 10$ sq.m = 240 sq.m

Sol.5. Given, area = 18 sq.units and one side = 3 units
 $Area = \text{one side} \times \text{other side}$

$$So, \text{other side} = \frac{Area}{\text{one side}} = \frac{18}{3} \text{ unit} = 6 \text{ unit}$$

Concept Recap 13.3

- Sol.1.** (a) Perimeter = 3 cm + 3 cm + 3 cm = 9cm
 (b) Perimeter = 2 cm + 3 cm + 2 cm + 5 cm + 4 cm = 16 cm
 (c) Perimeter = 6 cm + 2 cm + 5 cm + 4 cm = 17 cm
- Sol.2.** Perimeter = 4m + 3m + 4m + 3m = 14m
 Thus, perimeter of carpet is 14m.
- Sol.3.** Perimeter of the frame = 90 cm + 200 cm + 200 cm + 90 cm = 580 cm

Interactive Practice

Sol.1. Perimeter = 5 cm + 3 cm + 5 cm + 3 cm = 16 cm

Area = 5 cm × 3 cm = 15 sq. cm.

Sol.2. Given, length = 25 m

width = 30 m

Area = length × width

= 25 × 30

= 750 sq. m

Sol.3. Area = length × width

= 8 m × 7 m

= 56 sq. m.

Sol.4. Height = $\frac{240}{4 \times 5}$

= $\frac{240}{20}$

= 120 cm

Sol.5. Area of first shape = 6 × 6

= 36 sq. cm

Area of second shape = 7 × 5

= 35 sq. cm

36 sq. cm \square 35 sq. cm

Hence, second shape has larger area

Sol.6. Given, Area of square = 25 sq. cm

we know, area of square = side × side

∴ 25 = side × side

(or) 5 × 5 = side × side

side = 5 cm

New perimeter of square = 4 × side

= 4 × 5

= 20 cm

Creative Corner

Do yourself

**Chapter-14
Data Handling**

Concept Recap 14.1

Sol.1. Sajal	☺☺☺☺☺☺☺☺	III
Anshuman	☺☺	II
Kartik	☺☺☺☺☺☺☺☺	II
Preeti	☺☺☺☺	III
Sanjana	☺☺☺☺☺☺	I

Scale : 1 ☺ = 1 toy

Sol.2. Fanta	☺☺☺
Slice	☺☺☺☺☺
Coke	☺☺☺☺☺☺
Limca	☺
Sprite	☺☺☺☺

Scale : 1 ☺ = 5 bottles

Sol.3.

Colour	Tally Marks	Number of Balloons
Red	III III III III	18
Green	III III III III I	21
Blue	III III II	12
Yellow	III III II	12
Pink	III III III	15
White	III III	9

Concept Recap 14.2

Sol.1. Name of the group	Name of the members
Boys	3
Girls	7
Horses	6
Dogs	7
Mice	8

(a) Mice (b) Boys

Sol.2. (a) Vijay Shankar (b) Sidharth Kaul

(c) Vijay Shankar

(d) Deepak Chahar, Khaleel Ahmed, Kunal Pandya

(e) Difference = 102 – 28 = 74

(f) Runs need = 100 – 76 = 24

Sol.3. (a) Dance

(b) No. of students = 4 × 3 = 12

(c) Cooking

(d) No. of students = 7 × 3 + 5 × 3 = 21 + 15 = 36

(e) No. of students = 8 × 3 = 24

Concept Recap 14.3

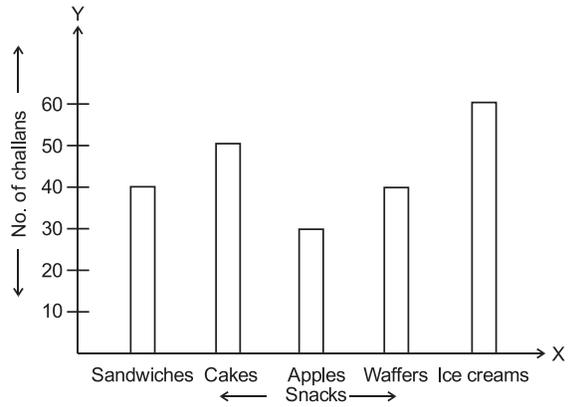
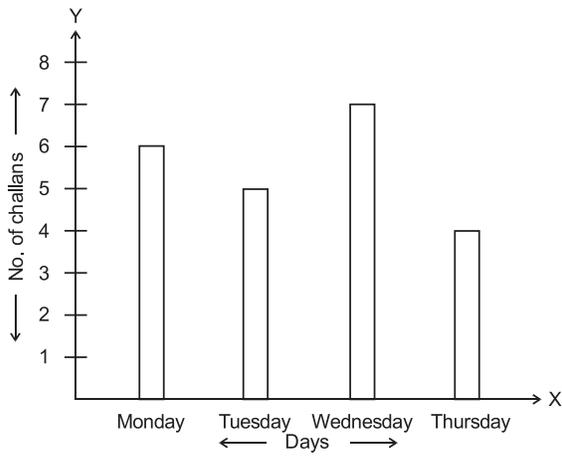
Sol.1. Music

Sol.2. Dance and computer games

Sol.3. 80

Sol.4. (a) False (b) False (c) True

Interactive Practice



- Sol.4.** (a) 40
 (b) 70
 (c) Maths
 (d) Hindi

Sol.2.

Day	No. of absentee
Ist	☺☺☺☺
IIInd	☺☺☺☺☺
IIIrd	☺☺☺
IVth	☺☺☺☺
Vth	☺☺☺☺☺☺

Each ☺ stands for 10 absentee

Creative Corner

Do yourself

Mathematics, Class-4

Chapter-1 Revision

- Sol.1.** (a) 7600 = Seven thousand six hundred
 (b) 8720 = Eight thousand seven hundred twenty
 (c) 6003 = Six thousand three
 (d) 4863 = Four thousand eight hundred sixty three
 (e) 9999 = Nine thousand nine hundred ninety nine
 (f) 10000 = Ten thousand
 (g) 5340 = Five thousand three hundred forty
 (h) 3098 = Three thousand ninety eight

- Sol.2.** (a) Five thousand eight hundred twenty-four = 5824
 (b) Six thousand nine hundred-ninety nine = 6999
 (c) Eight thousand seven hundred-two = 8702
 (d) Nine thousand forty-eight = 9048

- Sol.3.** (a) 410, 420, 430, 440, 450, 460, 470, 480
 (b) 512, 524, 536, 548, 560, 572, 584, 596
 (c) 6000, 6500, 7000, 7500, 8000, 8500, 9000, 9500
 (d) 8010, 8030, 8050, 8070, 8090, 8110, 8130, 8150

- Sol.4.** (a) The face value of 3 in 5384 = 3
 (b) The place value of 9 in 9852 = 9000
 (c) The place value of 0 is always is 0
 (d) The largest four digit number is 9999.

- Sol.5.** Place value of 5s in 5852 = 5000 and 50
 Difference = 5000 - 50 = 4950

- Sol.6.** 8005, 8010, 8015, 8020, 8025, 8030, 8035

- Sol.7.** 3046

- Sol.8.** 9710

- Sol.9.** (a) $636 \leq 702$ (b) $5403 \geq 2473$

(c) $1562 \square 2 \times 1000$

$1562 \leq 2000$

(d) $8013 \square 9013 - 1000$

$8013 \square 8013$

- Sol.10.** (a) Ascending order is :
 5634, 6328, 6357, 6715, 7892, 8935

- (b) Ascending order is:
 870, 3099, 6400, 7409, 7490, 9999

- Sol.11.** (a) Descending order is :
 9999, 7760, 2439, 1099, 499, 92

- (b) Descending order is:
 9803, 9308, 8309, 8093, 8080, 3980

- Sol.12.** (a) $7932 = 7000 + 900 + 30 + 2$

(b) $8354 = 8000 + 300 + 50 + 4$

(c) $6190 = 6000 + 100 + 90$

(d) $9086 = 9000 + 80 + 6$

- Sol.13.** (a) $6000 + 300 + 40 + 1 = 6341$

(b) $7000 + 50 = 7050$

(c) $9000 + 900 + 3 = 9903$

(d) $8000 + 400 + 20 + 5 = 8425$

Sol.14. (a)
$$\begin{array}{r} 9467 \\ + 96 \\ \hline 10045 \end{array}$$
 (b)
$$\begin{array}{r} 6973 \\ + 809 \\ \hline 8530 \end{array}$$

Sol.15. (a)
$$\begin{array}{r} 9080 \\ - 4754 \\ \hline 4326 \end{array}$$
 (b)
$$\begin{array}{r} 9999 \\ - 7899 \\ \hline 2100 \end{array}$$

Sol.16. (a)
$$\begin{array}{r} 4469 \\ + 5099 \\ \hline 9568 \end{array}$$
 (b)
$$\begin{array}{r} 9568 \\ - 7450 \\ \hline 2118 \end{array}$$

$4469 - 5099 - 7450 = 2118$

(b)
$$\begin{array}{r} 4957 \\ + 5010 \\ \hline 9967 \end{array}$$

$$\begin{array}{r} 9967 \\ - 3984 \\ \hline 5983 \end{array}$$

$4957 + 5010 = 9967$

$9967 - 3984 = 5983$

$4957 - 3984 + 5010 = 5983$

Sol.17. (a)
$$\begin{array}{r} 7809 \\ + \boxed{2} \boxed{1} \boxed{7} \boxed{2} \\ \hline 9981 \end{array}$$
 (b)
$$\begin{array}{r} 9378 \\ - 549 \\ \hline 8829 \end{array}$$

Sol.18. (a) $108 = 100 + 5 + 3 = C + V + III = CVIII$

(b) $91 = 90 + 1 = (100 - 10) + 1 = XC + I = XCI$

(c) $28 = 20 + 5 + 3 = XX + V + III = XXVIII$

(d) $36 = 30 + 5 + 1 = XXX + V + I = XXXVI$

(e) $56 = 50 + 5 + 1 = L + V + I = LVI$

(f) $73 = 50 + 20 + 3 = L + XX + III = LXXIII$

Sol.19. (a) $XXII = 10 + 10 + 1 + 1 = 22$

(b) $XL = 50 - 10 = 40$

(c) $C = 100$

(d) $XC = 100 - 10 = 90$

(e) $XCVI = XC + VI = (100 - 10) + (5 + 1) = 90 + 6 = 96$

(f) $CXX = C + X + X = 100 + 10 + 10 = 120$

Sol.20. (a)
$$\begin{array}{r} 324 \\ \times 4 \\ \hline 1296 \end{array}$$
 (b)
$$\begin{array}{r} 214 \\ \times 7 \\ \hline 1498 \end{array}$$

(c)
$$\begin{array}{r} 405 \\ \times 16 \\ \hline 2430 \\ 4050 \\ \hline 6480 \end{array}$$
 (d)
$$\begin{array}{r} 82 \\ \times 24 \\ \hline 328 \\ 1640 \\ \hline 1968 \end{array}$$

Sol.21. (a) $235 \times 0 = 0$

(b) $648 \times 1 = 648$

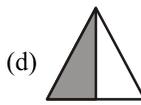
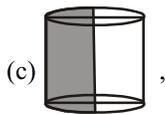
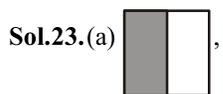
(c) $576 \times 10 = 5760$ (d) $3499 \times 100 = 349900$

Sol.22. (a)
$$\begin{array}{r} 270 \\ 9 \overline{)2434} \\ \underline{-18} \\ 63 \\ \underline{-63} \\ 04 \\ \underline{0} \end{array}$$

(b)
$$\begin{array}{r} 808 \\ 6 \overline{)4849} \\ \underline{-48} \\ 049 \\ \underline{-48} \\ 1 \\ \underline{0} \end{array}$$

(c)
$$\begin{array}{r} 1246 \\ 8 \overline{)9974} \\ \underline{-8} \\ 19 \\ \underline{-16} \\ 37 \\ \underline{-32} \\ 54 \\ \underline{-48} \\ 6 \\ \underline{0} \end{array}$$

(d)
$$\begin{array}{r} 789 \\ 5 \overline{)3946} \\ \underline{-35} \\ 44 \\ \underline{-40} \\ 46 \\ \underline{-45} \\ 1 \\ \underline{0} \end{array}$$



Sol.24. (a) One-fourth = $\frac{1}{4}$ (b) Four-fifths = $\frac{4}{5}$

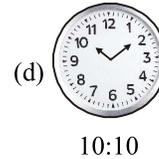
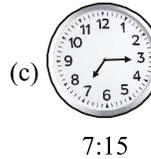
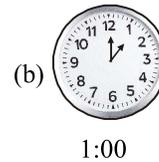
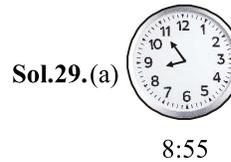
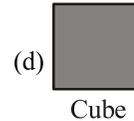
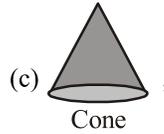
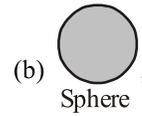
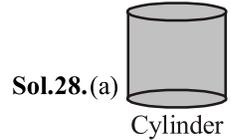
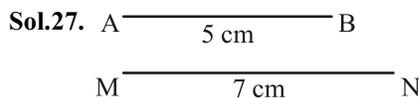
(c) Nine-Elevenths = $\frac{9}{11}$

Sol.25. (a) $\frac{2}{3}$ = Two-thirds (b) $\frac{7}{9}$ Seven-ninths

(c) $\frac{4}{7}$ Four-Sevenths (d) $\frac{9}{14}$ Nine-Fourteenths

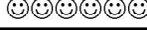
Sol.26. (a) $\frac{3}{5} \square \frac{2}{5}$ (b) $\frac{3}{7} \square \frac{3}{7}$

(c) $\frac{5}{9} \square \frac{8}{9}$ (d) $\frac{11}{15} \square \frac{14}{15}$



- Sol.31. (a) All the four sides of a square are equal.
(b) A triangle has three sides and three corners.
(c) Opposite sides of a triangle are equal.
(d) A square has two diagonals.

Sol.32.

Sajal		
Anshu		
Kartikey		
Prct		
Sam		

Scale : 1  = 1 toy

- Sol.33. (a) Their are five types of sports items in the store room.

- (b) Tennis balls are maximum in members.

(c)

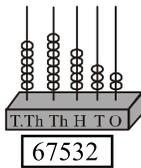
Name of sports items	Number of sports items
Table tennis rackets	4
Balls (tennis)	14
Footballs	5
Badminton rackets	4
Cricket bats	4

Chapter-2 Number System

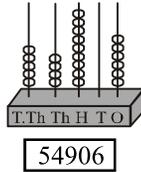
Concept Recap 2.1

Sol.1. (a) 24386 (b) 60509 (c) 63140

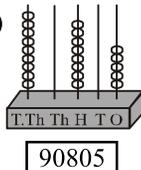
Sol.2. (a)



(b)



(c)



Concept Recap 2.2

Sol.1. (a) 5020 = 5,020 (b) 80003 = 80,003

(c) 200105 = 2,00,105

(d) 2003500 = 20,03,500

(e) 67583 = 67,583

(f) 952354 = 9,52,354

Sol.2. (a) 53,106 = Fifty three thousand one hundred six

(b) 59,019 = Fifty nine thousand nineteen

(c) 2,04,071 = Two lakh four thousand seventy one

(d) 30,33,030 = Thirty lakh thirty three thousand thirty.

(e) 56,472 = Fifty six thousand four hundred seventy two

(f) 8,41,243 = Eight lakh forty one thousand two hundred forty three

Sol.3. (a) Fifteen thousand six hundred eighty two = 15,682

(b) Sixty thousand fifty nine = 60,059

(c) Nineteen thousand one = 19,001

(d) Two lakh fifty six thousand two hundred fourteen = 2,56,214

(e) Forty two lakh fifty seven thousand ninety eight = 42,57,098

(f) Sixty three lakh fifty thousand hundred ninety one = 63,50,491

Sol.4. 10506, 10507, 10508, 10509, 10510, 10511, 10512, 10513, 10514

Sol.5. 60402, 60403, 60404, 60405, 60406, 60407, 60408, 60409

Concept Recap 2.3

Sol.1. (a) 364619 = 364,619

(b) 1679102 = 1,679,102

(c) 5100309 = 5,100,309

(d) 12317007 = 12,317,007

(e) 509085 = 509,085

(f) 3735984 = 3,735,984

Sol.2. (a) 360,520 = Three hundred sixty thousand five hundred twenty

(b) 1,400,317 = One million four hundred thousand three hundred seventeen

(c) 7,010,008 = Seven million ten thousand eight

(d) 10,300,103 = Ten million three hundred thousand one hundred three

(e) 408,074 = Four hundred eight thousand seventy four

(f) 2,624,873 = Two million six hundred twenty four thousand eight hundred seventy three

Sol.3. (a) Three hundred five thousand six hundred eighty two = 305,682

(b) Five hundred Thousand, ninety-nine = 5,000,099

(c) Two million three hundred ten thousand one hundred eight = 2,310,108

(d) Ten million nine hundred nine thousand nine hundred ninety nine = 10,909,999

(e) Eighty five million three hundred two thousand thirteen = 85,302,013

(f) Sixty-two million four hundred three thousand one hundred twenty-three = 62,403,123

Concept Recap 2.4

S.No.	Digit	Place	Face Value	Place Value
(a)	<u>2</u> 3076	thousands	3	3000
(b)	2359 <u>6</u> 1	tens	6	60
(c)	<u>8</u> 37209	lakh	8	800000
(d)	<u>5</u> 247296	ten lakh	5	5000000

Sol.2. Place value of 8 in 4896500 = 800000

Place value of 8 in 1580776 = 80000

Difference = 800000 - 80000 = 720000

Sol.3. Place values of 5s in 235257 = 5000 and 50

Sum = 5000 + 50 = 5050

Sol.4. (a) 123527 = 100000 + 20000 + 3000 + 500 + 20 + 7

(b) 429010 = 400000 + 20000 + 9000 + 10

(c) 90494 = 90000 + 400 + 90 + 4

- (d) $1607503 = 1000000 + 600000 + 7000 + 500 + 3$
- Sol.5.** (a) $30000 + 700 + 80 + 4 = 30784$
 (b) $200000 + 4000 + 100 + 3 = 204103$
 (c) $100000 + 30000 + 2000 + 100 + 70 + 6 = 132176$
 (d) $600000 + 3000 + 8 = 603008$

Concept Recap 2.5

- Sol.1.** (a) $92009 < 92090$
 (b) $109050 < 110005$
 (c) $120101 < 121001$
 (d) $1635037 < 1635073$
 (e) $976549 = 976549$
 (f) $195492 < 196432$

- Sol.2.** (a) Ascending order is:
 $10039, 16940, 27960, 160940, 213500$
 (b) Ascending order is:
 $29678, 31107, 269090, 301090, 303000$

- Sol.3.** (a) Descending order is:
 $55505, 55055, 55005, 50550, 50055$
 (b) Descending order is:
 $92100, 91080, 90560, 29500, 29190$

- Sol.4.** (a) 29100, (b) 35000, (c) 2867010, (d) 3560000,
 (e) 9999300

- Sol.5.** (a) 69099, (b) 119999, (c) 2860099, (d) 6631699,
 (e) 6809999

Concept Recap 2.6

- Sol.1.** (a) 379 (b) 408 (c) 257
Sol.2. (a) 2038 (b) 4579 (c) 3089
Sol.3. 7099
Sol.4. (a) 943 (b) 850
Sol.5. (a) 8651 (b) 8720
Sol.6. 6620

Concept Recap 2.7

- Sol.1.** (a) 394 is rounded to 390.
 (b) 505 is rounded to 510.
 (c) 871 is rounded to 870.
 (d) 1023 is rounded to 1020.
- Sol.2.** (a) 817 is rounded to 800.
 (b) 593 is rounded to 600.
 (c) 1386 is rounded to 1400.
 (d) 9802 is rounded to 9800.
- Sol.3.** (a) 9561 is rounded to 10000.
 (b) 6831 is rounded to 7000.
 (c) 5773 is rounded to 6000.
 (d) 17265 is rounded to 17000.

Interactive Practice

- Sol.1.** (a) True (b) True
Sol.2. Place value of 1 in 9163426 = 100000
 Place value of 3 in 9163426 = 3000
 Difference = $100000 - 3000 = 97000$
Sol.3. Place value of 5 in 9530703 = 500000
 Place value of 7 in 9530703 = 700
 Sum = $500000 + 700 = 500700$
Sol.4. (a) $500505 < 505005$
 (b) $9063719 > 9063179$
Sol.5. Greatest 5 digit number = 99973
 Smallest 5 digit number = 33379
Sol.6. Greatest number = 870
Sol.7. (a) Smallest 5 digit number 10000
 (b) Greatest 5 digit number 99999

Chapter-3
Roman Numerals

Concept Recap 3.1

- Sol.1.** (a) $80 = 50 + 10 + 10 + 10 = L + X + X + X = LXXX$
 (b) $63 = 50 + 10 + 3 = L + X + III = LXIII$
 (c) $168 = 100 + 50 + 10 + 5 + 3 = C + L + X + V + III = CLXVIII$
 (d) $237 = 100 + 100 + 10 + 10 + 10 + 5 + 2 = C + C + X + X + X + V + II = CCXXXVII$
 (e) $209 = 200 + 9 = CC + IX = CCIX$
 (f) $408 = 400 + 8 = CD + VIII = CDVIII$
 (g) $599 = 500 + 90 + 9 = D + XC + IX = DXCIX$
 (h) $1000 = M$
- Sol.2.** (a) $LXIII = 50 + 10 + 3 = 63$
 (b) $XCVI = XC + VI = (100 - 10) + (5 + 1) = 90 + 6 = 96$
 (c) $CDV = CD + V = (500 - 100) + 5 = 400 + 5 = 405$
 (d) $CXXXIX = C + XXX + IX = 100 + 30 + (10 - 1) = 130 + 9 = 139$
 (e) $DCCIII = D + CC + III = 500 + 200 + 3 = 700 + 3 = 703$
 (f) $CMIX = CM + IX = (1000 - 100) + (10 - 1) = 900 + 9 = 909$
 (g) $MDC = M + D + C = 1000 + 500 + 100 = 1500 + 100 = 1600$
 (h) $MM = 1000 + 1000 = 2000$
- Sol.3.** (a) $X + XXX = 10 + 30 = 40$
 and $XL = 50 - 10 = 40$

Both are equal

So, $X + XXX \boxed{=} XL$

(b) $IX + XLII = 9 + 42 = 51$
and $L = 50$

Here, $51 > 50$

So, $IX + XLII \boxed{>} L$

(c) $XX + XXV = 20 + 25 = 45$
and $XL + V = 40 + 5 = 45$

Both are equal

So, $XX + XXV \boxed{=} XL + V$

(d) $XIX + XXX = 19 + 30 = 49$
and $XLIX = 40 + 9 = 49$

Both are equal

So, $XIX + XXX \boxed{=} XLIX$

(e) $XXIX + XX = (20 + 9) + 20 = 29 + 20 = 49$
and $L = 50$

Here, $49 < 50$

So, $XXIX + XX \boxed{<} L$

(f) $XLIII + 1 = (40 + 3) + 1 = 43 + 1 = 44$
and $XL = 50 - 10 = 40$

Here, $44 > 40$

So, $XLIII + 1 \boxed{>} XL$

Sol.4. (a) $13 + 25 = 38 = 30 + 8 = XXX + VIII = XXXVIII$

(b) $25 + 25 = 50 = L$

(c) $20 + 19 = 39 = 30 + 9 = XXX + IX = XXXIX$

(d) $40 + 10 = 50 = L$

(e) $10 + 37 = 47 = 40 + 7 = XL + VII = XLVII$

(f) $22 + 23 = 45 = 40 + 5 = XL + V = XLV$

Sol.5. Ascending order is:

X, XX, XXX, XL, L, C

Sol.6. Descending order is:

XXIX, XIX, XIII, XII, XI, IX

Sol.7. (a) $12 + 12 = 24 = 20 + 4 = XX + IV = XXIV$

(b) $59 - 19 = 40 = XL$

(c) $8 \times 4 = 32 = 30 + 2 = XXX + II = XXXII$

(d) $81 \div 9 = 9 = IX$

Sol.8. (a) $V + IV = 5 + 4 = 9$

(b) $XXX + IV = 30 + 4 = 34$

(c) $X + I = 10 + 1 = 11$

(d) $XX + X = 20 + 10 = 30$

Sol.9. (a) $9 - 5 = 4 = IV$

(b) $16 - 7 = 9 = IX$

(c) $28 - 14 = 14 = XIV$

(d) $23 - 16 = 7 = VII$

Interactive Practice

Sol.1. (a) $40 + 50 = 90 = XC$

(b) $960 \div 10 = 96 = 90 + 6 = XC + VI = XCVI$

(c) $8 \times 8 = 64 = 60 + 4 = LX + IV = LXIV$

(d) $6 \times 7 = 42 = 40 + 2 = XL + II = XLII$

Sol.2. (a) $LXXX \div VIII = 80 \div 8 = 10 = X$

(b) $VI \times XV = 6 \times 15 = 90 = XC$

(c) $XXVIII + XXVII = 28 + 27 = 55 = LV$

Sol.3. (a) meaningful

(b) meaningless, since any symbol cannot be repeated more than three times.

(c) meaningless

(d) meaningful

(e) meaningful

(f) meaningless

(g) meaningless, since V cannot be repeated.

(h) meaningful

Sol.4. (a) $123 + LXIII$

$= 123 + (50 + 10 + 3)$

$= 123 + 63$

$= 186$

(b) $59 + LXIX$

$= 59 + (50 + 10 + 9)$

$= 59 + 69$

$= 128$

(c) $CCV + 309$

$= (100 + 100 + 5) + 309$

$= 205 + 309$

$= 614$

Creative Corner

Do yourself

Chapter-4 Addition

Concept Recap 4.1

Sol.1. (a)

T	Th	Th	H	T	O
6	7	1	3	3	
+	2	1	7	4	5
<hr/>					
8	8	8	7	8	

 (b)

T	Th	Th	H	T	O
4	7	3	1	9	
+	1	1	3	6	0
<hr/>					
5	8	6	7	9	

(c)

L	T	Th	Th	H	T	O
7	2	2	3	3	2	
+	1	4	0	0	0	2
<hr/>						
8	8	4	5	3	5	

Sol.3. Profit of I year = ₹ 230146

$$\begin{aligned} \text{Profit for 2020} &= \text{I year profit (2019)} + 325422 \\ &= 230146 \\ &= + 325422 \\ &\quad \underline{555568} \end{aligned}$$

Hence, profit for 220 is ₹ 5,55,568 toys in two years.

Sol.4. I year purchase = 380176
 II year Purchase = +405203
 Total Purchase = $\underline{785379}$

Hence, It purchased 785379 toys in two years.

Concept Recap 4.2

Sol.1. (a) $\begin{array}{r} 56349 \\ + 34763 \\ \hline 91112 \end{array}$ (b) $\begin{array}{r} 93768 \\ + 24597 \\ \hline 15636 \\ \hline 134001 \end{array}$

(c) $\begin{array}{r} 365849 \\ 156482 \\ 657 \\ + 2304 \\ \hline 52592 \end{array}$

Sol.2. (a) $\begin{array}{r} 154632 \\ + 134562 \\ \hline 345631 \\ \hline 634825 \end{array}$ (b) $\begin{array}{r} 52364 \\ + 5412 \\ \hline 64 \\ \hline 57840 \end{array}$

Sol.3. Total earning = 20242
 = 22624
 = +18634
 $\underline{61500}$

Sol.4. Total courier delivered = 11015
 = + 9408
 $\underline{20423}$

Sol.5. Male population = Female population + 67989
 = 448796 + 67989
 $\begin{array}{r} 448796 \\ + 67989 \\ \hline 516785 \end{array}$

Hence, male population is 516785.

Total population = Male population + Female population
 $\begin{array}{r} 516785 \\ + 448796 \\ \hline 965581 \end{array}$

Hence, Total population is 965581.

Concept Recap 4.3

Sol.1. (a) $24378 + 73016 = 73016 + 24378$
 (b) $52823 + 35629 = 35629 + 52823$
 (c) $(46381 + 801) + 71824 = 46381 + (801 + 71824)$

(d) $3781 + (7602 + 83649) = (3781 + 83649) + 7602$

Sol.2. (a) T.Th Th H T O $\begin{array}{r} 6 \quad \boxed{9} \quad 2 \quad 7 \quad 1 \\ + \boxed{2} \quad 6 \quad 1 \quad \boxed{2} \quad 3 \\ \hline 9 \quad \boxed{5} \quad \boxed{3} \quad 9 \quad \boxed{4} \end{array}$ (b) T. Th Th T O $\begin{array}{r} \boxed{5} \quad 4 \quad \boxed{2} \quad 6 \quad 2 \\ + 3 \quad 4 \quad 9 \quad \boxed{5} \quad 5 \\ \hline 8 \quad \boxed{9} \quad 2 \quad 1 \quad \boxed{7} \end{array}$
 (c) T.Th Th H T O $\begin{array}{r} 6 \quad 1 \quad 0 \quad \boxed{5} \quad 4 \\ + \boxed{2} \quad 3 \quad \boxed{9} \quad 8 \quad \boxed{8} \\ \hline 8 \quad \boxed{5} \quad 0 \quad 4 \quad 2 \end{array}$

Concept Recap 4.4

Teacher and Students are advised to frame the word problems in their own words.

Concept Recap 4.5

Sol.1. (a) 2160 rounded to 2200
 5386 rounded to 5400
 Estimated sum = $\underline{7600}$
 2160
 + 5386
 Actual sum = $\underline{7546}$

(b) 6130 rounded to 6100
 1420 rounded to 1400
 333 rounded to + 300
 Estimated sum = $\underline{7800}$
 6130
 1420
 + 333
 Actual sum = $\underline{7883}$

(c) 20093 rounded to 20100
 39685 rounded to 39700
 452 rounded to + 500
 Estimated sum = $\underline{60300}$
 20093
 39685
 + 452
 Actual sum = $\underline{60230}$

Sol.2.(a) 413629 rounded to 414000
 17455 rounded to 17000
 28383 rounded to 28000
 Estimated sum = $\underline{459000}$
 413629
 17455
 + 28383
 Actual sum = $\underline{459467}$

(b) 56702 rounded to 57000
 11473 rounded to 11000
 44132 rounded to + 44000
 Estimated sum = $\underline{112000}$

$$\begin{array}{r} 56702 \\ 11473 \\ + 44132 \\ \hline \text{Actual sum} = 112307 \end{array}$$

Interactive Practice

- Sol.1.** (a) $\begin{array}{r} 41372 \\ + 36521 \\ \hline 77893 \end{array}$ (b) $\begin{array}{r} 84361 \\ + 17649 \\ \hline 102010 \end{array}$
- (c) $\begin{array}{r} 59210 \\ + 37899 \\ \hline 97109 \end{array}$
- Sol.2.** (a) $\begin{array}{r} \boxed{4}\boxed{3} 5 7 \\ + 4 1 \boxed{5} 0 \\ \hline 8 5 0 \boxed{7} \end{array}$ (b) $\begin{array}{r} 2 \boxed{8} 5 \boxed{9} \\ + \boxed{6} 3 \boxed{8} 3 \\ \hline 9 2 4 2 \end{array}$
- (c) $\begin{array}{r} \boxed{4} 2 \boxed{1} \boxed{7} 7 \\ + 3 \boxed{4} 9 2 \boxed{1} \\ \hline 7 7 0 9 8 \end{array}$
- Sol.3.** (a) $12 + 4 = 4 + 12 = 16$
(b) $4 + 9 = 9 + 4 = 13$
- Sol.4.** (a) $14 + (8 + 1) = (14 + 8) + 1$
(b) $10 + (7 + 5) = (10 + 7) + 5$
- Sol.5.** (a) $12 + 0 = 12$ (b) $0 + 8 = 8$
(c) $2 + 0 = 2$
- Sol.6.** Cost of vehicle = ₹ 59425
Repairing = ₹ 8652
Total cost = ₹ 68077
- Sol.7.** No. of people who watched semifinal = 82317
Difference = + 31896
No. of people who watched final = 114213

Creative Corner

Sol.1. (a) Fill all the blanks in circle:

(1)

(2)

(3)

(4)

Chapter-5 Subtraction

Concept Recap 5.1

- Sol.1.** (a) T.Th Th H T O (b) T.Th Th H T O
- $$\begin{array}{r} 7 4 9 7 3 \\ - 1 1 4 3 0 \\ \hline 6 3 5 4 3 \end{array} \quad \begin{array}{r} 9 2 7 7 5 \\ - 2 1 4 5 1 \\ \hline 7 1 3 2 4 \end{array}$$
- (c) T.Th Th H T O
- $$\begin{array}{r} 5 7 7 2 6 \\ - 1 1 6 1 3 \\ \hline 4 6 1 1 3 \end{array}$$
- Sol.2.** (a) $\begin{array}{r} 62901 \\ - 31600 \\ \hline 31301 \end{array}$ (b) $\begin{array}{r} 20616 \\ - 5040 \\ \hline 15576 \end{array}$ (c) $\begin{array}{r} 878999 \\ - 211888 \\ \hline 667111 \end{array}$
- Sol.3.** (a) Minuend = 58697
Subtrahend = -37486
Difference = 21211
- (b) Minuend = 467891
Subtrahend = -234561
Difference = 233330
- Sol.4.** (a) L.T.Th Th H T O (b) L.T.Th Th H T O
- $$\begin{array}{r} 9 5 8 7 6 7 \\ - \boxed{7} \boxed{2} 4 \boxed{3} 0 5 \\ \hline 2 3 \boxed{4} 4 \boxed{6} \boxed{2} \end{array} \quad \begin{array}{r} 8 6 0 5 4 7 \\ - 2 \boxed{3} \boxed{0} 2 \boxed{1} 3 \\ \hline \boxed{6} 3 0 \boxed{3} 3 \boxed{4} \end{array}$$
- Sol.5.** Here ₹ 396879 > ₹ 275634
- $$\begin{array}{r} ₹ 396879 \\ - ₹ 275634 \\ \hline 121245 \end{array}$$

Thus, the cost of car is greater than the cost of motorcycle by ₹ 1,21,245

Concept Recap 5.2

- Sol.1.** (a) T.Th Th H T O (b) T.Th Th H T O
- $$\begin{array}{r} 9 0 7 9 5 \\ - 7 9 8 8 6 \\ \hline 1 0 9 0 9 \end{array} \quad \begin{array}{r} 9 4 5 6 2 \\ - 7 9 4 2 6 \\ \hline 1 5 1 3 6 \end{array}$$
- (c) T.Th Th H T O
- $$\begin{array}{r} 6 7 0 3 4 \\ - 4 9 9 7 8 \\ \hline 1 7 0 5 6 \end{array}$$
- Sol.2.** (a) $\begin{array}{r} 43016 \\ - 24167 \\ \hline 18849 \end{array}$ (b) $\begin{array}{r} 123405 \\ - 69547 \\ \hline 053858 \end{array}$ (c) $\begin{array}{r} 111111 \\ - 98567 \\ \hline 012544 \end{array}$

Sol.3. (a) 7 thousand 4 hundred = 7400
 - 5 thousand 8 hundred = -5800
 1 thousand 6 hundred = 1600

Sol.4.
$$\begin{array}{r} 22222 \\ - 9999 \\ \hline 12223 \end{array}$$

Sol.5. (a)
$$\begin{array}{r} 5\boxed{7}43 \\ -\boxed{3}537 \\ \hline 220\boxed{6} \end{array}$$

(c)
$$\begin{array}{r} 38\boxed{8}3 \\ -2\boxed{3}64 \\ \hline \boxed{1}51\boxed{9} \end{array}$$

Concept Recap 5.3

Sol.1. (a) $28173 - 0 = 28173$ (b) $82999 - 1 = 82998$
 (c) $89322 - 1 = 89321$ (d) $115236 - 0 = 115236$

Sol.2. (a)
$$\begin{array}{r} 18983 \\ + 6678 \\ \hline 25661 \end{array}$$
 and
$$\begin{array}{r} 25661 \\ - 9789 \\ \hline 15872 \end{array}$$

 So, $18983 + 6678 - 9789 = 15872$

(b)
$$\begin{array}{r} 252743 \\ + 620301 \\ \hline 873044 \end{array}$$
 and
$$\begin{array}{r} 873044 \\ - 119254 \\ \hline 753790 \end{array}$$

 So, $252743 + 620301 - 119254 = 753790$

(c)
$$\begin{array}{r} 431296 \\ + 217175 \\ \hline 648471 \end{array}$$
 and
$$\begin{array}{r} 648471 \\ - 50178 \\ \hline 598293 \end{array}$$

 So, $431296 + 217175 - 50178 = 598293$

(d)
$$\begin{array}{r} 300192 \\ + 432170 \\ \hline 732362 \end{array}$$
 and
$$\begin{array}{r} 732362 \\ - 299429 \\ \hline 432933 \end{array}$$

 So, $300192 + 432170 - 299429 = 432933$

Sol.3. Sum =
$$\begin{array}{r} 545327 \\ + 325173 \\ \hline 870500 \end{array}$$

Difference =
$$\begin{array}{r} 545327 \\ - 325173 \\ \hline 220154 \end{array}$$

Now,
$$\begin{array}{r} 870500 \\ - 220154 \\ \hline 650346 \end{array}$$

Concept Recap 5.4

Sol.1. $18649 \leq 42519$
 Hence, blue colour's clips are more
 Difference =
$$\begin{array}{r} 42519 \\ - 18649 \\ \hline 23870 \end{array}$$

Sol.2. Remaining bags of carrot =
$$\begin{array}{r} 86475 \\ - 52431 \\ \hline 34044 \end{array}$$

Sol.3. Money with Arman =
$$\begin{array}{r} 12642 \\ - 8871 \\ \hline 3771 \end{array}$$

Sol.4. $12506 \leq 13934$
 Hence, Riyan has made more runs.
 Difference =
$$\begin{array}{r} 13934 \\ - 12506 \\ \hline 1428 \end{array}$$

Concept Recap 5.5

Teacher and Students are advised to frame word problems in their own words.

Concept Recap 5.6

Sol.1. (a) Rounding off to the nearest 100.
 $8159 \rightarrow 8200$
 $3438 \rightarrow 3400$
 Estimated difference =
$$\begin{array}{r} 8200 \\ - 3400 \\ \hline 4800 \end{array}$$

$$\begin{array}{r} 8159 \\ - 3438 \\ \hline \end{array}$$

Actual difference =
$$\begin{array}{r} 8159 \\ - 3438 \\ \hline 4721 \end{array}$$

(b) $85073 \rightarrow 85100$
 $41296 \rightarrow 41300$
 Estimated difference =
$$\begin{array}{r} 85100 \\ - 41300 \\ \hline 43800 \end{array}$$

$$\begin{array}{r} 85073 \\ - 41296 \\ \hline \end{array}$$

Actual difference =
$$\begin{array}{r} 85073 \\ - 41296 \\ \hline 43777 \end{array}$$

(c) $736342 \rightarrow 736300$
 $435637 \rightarrow 435600$
 Estimated difference =
$$\begin{array}{r} 736300 \\ - 435600 \\ \hline 300700 \end{array}$$

$$\begin{array}{r} 736342 \\ - 435637 \\ \hline \end{array}$$

Actual difference =
$$\begin{array}{r} 736342 \\ - 435637 \\ \hline 300705 \end{array}$$

Sol.2. (a) Actual difference Estimated difference
 $47550 \rightarrow 48000$
 $- 26750 \rightarrow - 27000$

$$\begin{array}{r} 20800 \\ \hline \end{array}$$

(b) Actual difference Estimated difference
 $27809 \rightarrow 28000$
 $- 8196 \rightarrow - 8000$

$$\begin{array}{r} 19613 \\ \hline \end{array}$$

(c) Actual difference Estimated difference
 $827256 \rightarrow 827000$
 $- 152437 \rightarrow - 152000$

$$\begin{array}{r} 674819 \\ \hline \end{array}$$

- Sol.3.** No. of men and women = 25356 → 25400
 No. of men = 14245 → - 14200
 No. of women = 11200
- Sol.4.** Total buttons = 34364 → 34000
 No. of blue buttons = 16745 → - 17000
 No. of red buttons = 17000

Interactive Practice

- Sol.1.** (a) $\begin{array}{r} 888059 \\ - 110753 \\ \hline 777306 \end{array}$ (b) $\begin{array}{r} 959767 \\ - 549423 \\ \hline 410344 \end{array}$
 (c) $\begin{array}{r} 992113 \\ - 206410 \\ \hline 785703 \end{array}$ (d) $\begin{array}{r} 665907 \\ - 380878 \\ \hline 285029 \end{array}$
- Sol.2.** (a) $\begin{array}{r} 8 \boxed{5} 9 0 \\ - 3 0 0 2 \\ \hline \boxed{5} 5 \boxed{8} \boxed{8} \end{array}$ (b) $\begin{array}{r} 9 \boxed{8} 4 2 \\ - \boxed{6} 4 \boxed{1} 7 \\ \hline 3 4 2 \boxed{5} \end{array}$
 (c) $\begin{array}{r} \boxed{7} 2 \boxed{6} 8 \\ - 2 \boxed{6} 2 \boxed{1} \\ \hline 4 6 4 7 \end{array}$ (d) $\begin{array}{r} 2 3 \boxed{9} 6 \\ - \boxed{1} 0 8 2 \\ \hline 1 \boxed{3} 1 \boxed{4} \end{array}$

Sol.3. Required number = 16850 + 800 = 17650

Sol.4. Required number = $\begin{array}{r} 50000 \\ - 28364 \\ \hline = 21636 \end{array}$

Sol.5. Required number = 48665 - 888 = 47777

Sol.6. Money in the account = ₹ 255600
 Money withdraw = - ₹ 98300
 Balance in the account = ₹ 157300

Sol.7. Money given to daughter = ₹ 327500
 Money given to wife = + ₹ 124625
 Money given to (daughter + wife) = ₹ 452125
 Total money = ₹ 705000
 Money given to (daughter + wife) = - ₹ 452125
 Money given to son = ₹ 252875

- Sol.8.** (a) Rounding to 100 : Rounding to 1000 :
 59246 → 59200 59246 → 59000
 27305 → - 27300 27305 → - 27000
= 31900 = 32000
- (b) Rounding to 100 : Rounding to 1000 :
 62792 → 62800 62792 → 63000
 12450 → - 12500 12450 → - 12000
= 50300 = 51000

**Chapter-6
 Multiplication**

Concept Recap 6.1

- Sol.1.** (a) $345 \times 10 = \underline{3450}$ (b) $2037 \times 10 = \underline{20370}$
 (c) $3952 \times 10 = \underline{39520}$ (d) $98 \times 100 = \underline{9800}$

(e) $573 \times 100 = \underline{57300}$ (f) $2198 \times 1000 = \underline{2198000}$

- Sol.2.** (a) $256 \times 60 = 256 \times 6 \times 10$
 = $(256 \times 6) \times 10$
 = $1536 \times 10 = 15360$
- (b) $295 \times 80 = 295 \times 8 \times 10$
 = $(295 \times 8) \times 10$
 = $2360 \times 10 = 23600$
- (c) $347 \times 90 = 347 \times 9 \times 10$
 = $3123 \times 10 = 31230$
- (d) $381 \times 200 = (381 \times 2) \times 100$
 = $762 \times 100 = 76200$
- (e) $517 \times 400 = (517 \times 4) \times 100$
 = $2068 \times 100 = 206800$
- (f) $673 \times 700 = (673 \times 7) \times 100$
 = $4711 \times 100 = 471100$

- Sol.3.** (a) $2 \times 63 \times 5 = 63 \times (2 \times 5) = 63 \times 10 = 630$
 (b) $5 \times 97 \times 20 = 97 \times (20 \times 5) = 97 \times 100 = 9700$
 (c) $4 \times 86 \times 25 = 86 \times (25 \times 4) = 86 \times 100 = 8600$
 (d) $2 \times 73 \times 50 = 73 \times (50 \times 2) = 73 \times 100 = 7300$
 (e) $37 \times 4 \times 125 = 37 \times (125 \times 4) = 37 \times 500$
 = $(37 \times 5) \times 100 = 185 \times 100$
 = 18500
- (f) $4 \times 421 \times 250 = 421 \times (4 \times 250)$
 = $421 \times 1000 = 421000$

Concept Recap 6.2

- Sol.1.** (a) $\begin{array}{r} 3 2 7 \\ \times 5 8 \\ \hline 2 6 1 6 \\ 1 6 3 5 0 \\ \hline 1 8 9 6 6 \end{array}$ (b) $\begin{array}{r} 4 7 8 \\ \times 2 6 4 \\ \hline 1 9 1 2 \\ 2 8 6 8 0 \\ 9 5 6 0 0 \\ \hline 1 2 6 1 9 2 \end{array}$
- (c) $\begin{array}{r} 9 6 8 4 \\ \times 9 7 \\ \hline 6 7 7 8 8 \\ 8 7 1 5 6 0 \\ \hline 9 3 9 3 4 8 \end{array}$ (d) $\begin{array}{r} 1 7 8 6 \\ \times 4 2 0 \\ \hline 0 0 0 0 \\ 3 5 7 2 0 \\ 7 1 4 4 0 0 \\ \hline 7 5 0 1 2 0 \end{array}$

- Sol.2.** (a) $\begin{array}{r} 4 9 6 \\ \times 7 5 \\ \hline 2 4 8 0 \\ 3 4 7 2 0 \\ \hline 3 7 2 0 0 \end{array}$ (b) $\begin{array}{r} 3 5 7 \\ \times 4 8 \\ \hline 2 8 5 6 \\ 1 4 2 8 0 \\ \hline 1 7 1 3 6 \end{array}$ (c) $\begin{array}{r} 3 2 9 \\ \times 1 4 8 \\ \hline 2 6 3 2 \\ 1 3 1 6 0 \\ 3 2 9 0 0 \\ \hline 4 8 6 9 2 \end{array}$

(d) $\begin{array}{r} 746 \\ \times 253 \\ \hline 2238 \\ 37300 \\ 149200 \\ \hline 188738 \end{array}$	(e) $\begin{array}{r} 8624 \\ \times 18 \\ \hline 68992 \\ 86240 \\ \hline 155232 \end{array}$	(f) $\begin{array}{r} 2408 \\ \times 124 \\ \hline 9632 \\ 48160 \\ 240800 \\ \hline 298592 \end{array}$
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Sol.3. (a) $\begin{array}{r} 648 \\ \times 27 \\ \hline 4536 \\ 12960 \\ \hline 17496 \end{array}$	(b) $\begin{array}{r} 162 \\ \times 75 \\ \hline 810 \\ 11340 \\ \hline 12150 \end{array}$	(c) $\begin{array}{r} 2936 \\ \times 98 \\ \hline 23488 \\ 264240 \\ \hline 287728 \end{array}$
---	--	---

(d) $\begin{array}{r} 3134 \\ \times 276 \\ \hline 18804 \\ 219380 \\ 626800 \\ \hline 864984 \end{array}$	(e) $\begin{array}{r} 892 \\ \times 378 \\ \hline 7136 \\ 62440 \\ 267600 \\ \hline 337176 \end{array}$	(f) $\begin{array}{r} 713 \\ \times 965 \\ \hline 3565 \\ 42780 \\ 641700 \\ \hline 688045 \end{array}$
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Concept Recap 6.3

Sol.1. Roses in 1 garland = 72
Roses in 9 garlands = 72×9
= 648

Sol.2. 1 year = 365 days
3 years = 365×3 days
= 1095 days

Saving of 1 day = ₹ 87
Saving of 1095 days = ₹ 87×1095
= ₹ 95265

$$\begin{array}{r} 87 \\ \times 1095 \\ \hline 435 \\ 7830 \\ 0000 \\ 87000 \\ \hline 95265 \end{array}$$

Sol.3. Marbles in bag = 367
Marbles in 258 bags = 367×258
= 94686

$$\begin{array}{r} 367 \\ \times 258 \\ \hline 2936 \\ 18350 \\ 73400 \\ \hline 94686 \end{array}$$

Sol.4. Toffees in a packet = 876
Toffees in 564 packets = 876×564
= 494064

$$\begin{array}{r} 876 \\ \times 564 \\ \hline 3504 \\ 52560 \\ 438000 \\ \hline 494064 \end{array}$$

Sol.5. Distance travelled in 1 hour = 182 km
Distance travelled in 235 hours = 182×235 km
= 42770 km

$$\begin{array}{r} 182 \\ \times 235 \\ \hline 910 \\ 5460 \\ 36400 \\ \hline 42770 \end{array}$$

Concept Recap 6.4

Sol.1. Estimate the product:

- Round off 57 to nearest 10 = 60
Round off 88 to nearest 10 = 90
Estimated product = $60 \times 90 = 5400$
- Round off 84 to nearest 10 = 80
Round off 93 to nearest 10 = 90
Estimated product = $80 \times 90 = 7200$
- Round off 75 to nearest 10 = 80
Round off 64 to nearest 10 = 60
Estimated product = $80 \times 60 = 4800$
- Round off 114 to nearest 100 = 100
Round off 77 to nearest 10 = 80
Estimated product = $100 \times 80 = 8000$
- Round off 218 to nearest 100 = 200
Round off 52 to nearest 10 = 50
Estimated product = $200 \times 50 = 10000$
- Round off 573 to nearest 100 = 600
Round off 89 to nearest 10 = 90
Estimated product = $600 \times 90 = 54000$
- Round off 123 to 100 = 100
Round off 234 to 100 = 200
Estimated product = $100 \times 200 = 20000$
- Round off 483 to 100 = 500
Round off 597 to 100 = 600
Estimated product = $500 \times 600 = 300000$

Interactive practice

Sol.1. Multiply:

- $16 \times 2000 = (16 \times 2) \times 1000 = 32 \times 1000 = 32000$
- $47 \times 3000 = (47 \times 3) \times 1000 = 141 \times 1000 = 141000$

$$\begin{array}{r} \text{(c) } 108 \\ \times 68 \\ \hline 864 \\ 6480 \\ \hline 7344 \end{array}$$

$$\begin{array}{r} \text{(d) } 907 \\ \times 19 \\ \hline 8163 \\ 9070 \\ \hline 17233 \end{array}$$

$$\begin{array}{r} \text{(e) } 324 \\ \times 81 \\ \hline 324 \\ 25920 \\ \hline 26244 \end{array}$$

$$\begin{array}{r} \text{(f) } 4325 \\ \times 124 \\ \hline 17300 \\ 86500 \\ 432500 \\ \hline 536300 \end{array}$$

Sol.2. Sugarcane bundles in 1 cart = 485
Sugarcane bundles in 7 carts = 485×7
= 3395

Sol.3. Cost of 1 iron box = ₹ 565
Cost of 8 iron boxes = ₹ 565×8 = ₹ 4520

Sol.4. No. of days in July = 31
No. of hours in 1 day = 24 hours
No. of hours in 31 days = 24×31 hours
= 744 hours

Sol.5. Cost of 1 bicycle = ₹ 3665
Cost of 285 bicycle = ₹ 3665×285
= ₹ 10,44,525

Sol.6. (a) $150 \times 74 = 150 \times (75 - 1) = 150 \times 75 - 150$
= $11250 - 150 = 11100$
(b) $150 \times 76 = 150 \times (75 + 1) = 150 \times 75 + 150$
= $11250 + 150 = 11400$

Creative Corner
Do yourself

Chapter-7 Division

Concept Recap 7.1

$$\text{Sol.1. (a) } \begin{array}{r} 2156 \\ 4 \overline{)8624} \\ \underline{-8} \\ 6 \\ \underline{-4} \\ 22 \\ \underline{-20} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

Quotient = 2156
Remainder = 0
Check:

Divisor \times Quotient + Remainder
= $4 \times 2156 + 0$
= $8624 + 0$
= $8624 = \text{Dividend}$
Thus, the answer is correct.

$$\text{(2) } \begin{array}{r} 459 \\ 3 \overline{)1377} \\ \underline{-12} \\ 017 \\ \underline{-15} \\ 27 \\ \underline{-27} \\ 0 \end{array}$$

$$\text{(3) } \begin{array}{r} 209 \\ 6 \overline{)1255} \\ \underline{-12} \\ 055 \\ \underline{-54} \\ 1 \end{array}$$

Check:
 $6 \times 209 + 1$
= $1254 + 1$
= 1255

Check:
 $3 \times 459 + 0$
= $1377 + 0 = 1377$

$$\text{(4) } \begin{array}{r} 1862 \\ 5 \overline{)9314} \\ \underline{-5} \\ 43 \\ \underline{-40} \\ 31 \\ \underline{-30} \\ 14 \\ \underline{-10} \\ 4 \end{array}$$

Check:
 $5 \times 1862 + 4$
= $9310 + 4 = 9314$

Concept Recap 7.2

$$\text{Sol.1. (a) } \begin{array}{r} 321 \\ 16 \overline{)5140} \\ \underline{-48} \\ 34 \\ \underline{-32} \\ 20 \\ \underline{-16} \\ 4 \end{array}$$

Quotient = 321
Remainder = 4

$$\text{(c) } \begin{array}{r} 500 \\ 16 \overline{)8014} \\ \underline{-80} \\ 014 \end{array}$$

Quotient = 500
Remainder = 14

$$\text{(b) } \begin{array}{r} 500 \\ 14 \overline{)7008} \\ \underline{-70} \\ 08 \end{array}$$

Quotient = 500
Remainder = 8

$$\begin{array}{r} 8454 \\ 11 \overline{)92994} \\ \underline{-88} \\ 49 \\ \underline{-44} \\ 59 \\ \underline{-55} \\ 44 \\ \underline{-44} \\ 0 \end{array}$$

Quotient = 8454
Remainder = 0

$$\begin{array}{r} 529 \\ 19 \overline{)10052} \\ \underline{-95} \\ 55 \\ \underline{-38} \\ 172 \\ \underline{-171} \\ 1 \end{array}$$

Quotient = 529
Remainder = 1

$$\begin{array}{r} 2066 \\ 25 \overline{)51673} \\ \underline{-50} \\ 167 \\ \underline{-150} \\ 173 \\ \underline{-150} \\ 23 \end{array}$$

Quotient = 2066
Remainder = 23

Sol.3. (a) $1736 \div 10$ (b) $25004 \div 100$
 Quotient = 173 Quotient = 250
 Remainder = 6 Remainder = 4

(c) $80542 \div 100$
 Quotient = 805
 Remainder = 42

$$\begin{array}{r} 902 \\ 60 \overline{)54164} \\ \underline{-540} \\ 164 \\ \underline{-120} \\ 44 \end{array}$$

Quotient = 902
Remainder = 44

(b) Dividend = Quotient \times Divisor + Remainder
 $= 263 \times 57 + 43$ 263
 $= 14991 + 43$ $\times 57$
 $= 15034$ $\underline{1841}$
 $\underline{13150}$
 $\underline{14991}$

Concept Recap 7.3

Teacher and students are advised that they should frame a word problem in their own words.

Concept Recap 7.4

- Sol.1.** (a) 829 is rounded off to 800.
 42 is rounded off to 40.
 So, $800 \div 40 = 20$
 (b) 642 is rounded off to 600.
 63 is rounded off to 60.
 So, $600 \div 60 = 10$
 (c) 2798 is rounded off to 2800.
 54 is rounded off to 50.
 So, $2800 \div 50 = 56$
 (d) 3245 is rounded off to 3000.
 279 is rounded off to 300.
 So, $3000 \div 300 = 10$

- Sol.2.** Total Pencils = 613
 613 is rounded off to 600
 Total students = 28
 28 is rounded off to 30
 No. of pencils used by each students
 So, $600 \div 30 = 20$

$$\begin{array}{r} 30 \\ 20 \overline{)600} \\ \underline{-60} \\ 0 \end{array}$$

Concept Recap 7.5

- Sol.1.** No. of rooms required = $216 \div 4 = 54$

$$\begin{array}{r} 54 \\ 4 \overline{)216} \\ \underline{-20} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

- Sol.2.** No. of students on a bench = 6
 No. of benches required for 6264 students
 $= 6264 \div 6 = 1044$

$$\begin{array}{r} 1044 \\ 6 \overline{)6264} \\ \underline{-6} \\ 26 \\ \underline{-24} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

- Sol.3.** No. of rows required = $873 \div 9 = 97$

$$\begin{array}{r} 97 \\ 9 \overline{)873} \\ \underline{-81} \\ 63 \\ \underline{-63} \\ 0 \end{array}$$

Sol.4. No. of rooms in each floor = $2292 \div 6 = 382$

$$\begin{array}{r} 382 \\ 6 \overline{)2292} \\ \underline{-18} \\ 49 \\ \underline{-48} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

Concept Recap 7.6

Sol.1. Cost of 16 metres of cloth = ₹ 2000
 Cost of 1 metres of cloth = ₹ $2000 \div 16$
 = ₹ 125

Sol.2. Cost of 8 dolls = ₹ 640
 Cost of 1 doll = ₹ $640 \div 8$
 = ₹ 80

Sol.3. Cost of 9 cycles = ₹ 2925
 Cost of 1 cycle = ₹ $2925 \div 9 = ₹ 325$
 Cost of 4 cycles = ₹ $325 \times 4 = ₹ 1300$

Sol.4. On 15 litres car travels = 225 km
 On 1 litre car travels = $(225 \div 15)$ km = 15 km
 On 10 litres car travels = 15×10 km = 150 km

Sol.5. 20 trucks carry = 5000 bags
 1 truck carries = $(5000 \div 20)$ bags = 250 bags
 5 trucks carry = 250×5 bags = 1250 bags

Interactive Practice

Sol.1. (a)
$$\begin{array}{r} 26 \\ 29 \overline{)754} \\ \underline{-58} \\ 174 \\ \underline{-174} \\ 0 \end{array}$$

So, $754 \div 26 = 29$

(b)
$$\begin{array}{r} 14 \\ 30 \overline{)420} \\ \underline{-30} \\ 120 \\ \underline{-120} \\ 0 \end{array}$$

So, $420 \div 14 = 30$

(c)
$$\begin{array}{r} 28 \\ \times 39 \\ \hline 252 \\ - 840 \\ \hline 1092 \end{array}$$

So, $1092 \div 28 = 39$

Sol.2. No. of lines in 6 notebooks = 9120
 No. of lines in 1 notebook = $9120 \div 6 = 1520$

Sol.3. 98 bags of rice in a tempo.
 3038 bags of rice in $(3038 \div 98)$ tempos = 31

Sol.4. No. of notes = $9040 \div 20 = 452$

Sol.5. 79 bags of pulses in a wagon.
 9875 bags of pulses in $(9875 \div 79)$ wagon = 125

Sol.6. (a)
$$\begin{array}{r} 8 \\ 33 \overline{)274} \\ \underline{-264} \\ 10 \end{array}$$

(b)
$$\begin{array}{r} 96 \\ 47 \overline{)4531} \\ \underline{-423} \\ 301 \\ \underline{-282} \\ 19 \end{array}$$

(c)
$$\begin{array}{r} 31 \\ 281 \overline{)8873} \\ \underline{-843} \\ 443 \\ \underline{-281} \\ 162 \end{array}$$

Sol.7. The number is 54.
 Because, $54 < 60$, $54 > 48$
 and $54 \div 6$ (with no remainder)

Sol.8. The number is 65.
 Because, $65 > 56$, $65 < 66$
 and $65 \div 7$
 $Q = 9$, $R = 2$

Creative Corner

Do yourself

Chapter-8
Basic Geometrical Concepts

Concept Recap 8.1

Sol.1. (a) A ray has one end point.
 (b) A line cannot be drawn on paper.
 (c) A line does not have definite length.
 (d) A line segment has two end points.
 (e) A line segment can be drawn on paper.

Sol.2. (a) line, \overleftrightarrow{PQ} (b) ray, \overrightarrow{MN}
 (c) line segment, AB (d) line segment \overline{LM}

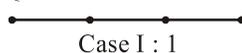
Sol.3. Do yourself

Sol.4. Do yourself

Sol.5. (a) 6 (b) 6 (c) 5 (d) 7

Sol.6. BA, CA, DA, EA, DE, CE, BE, AE

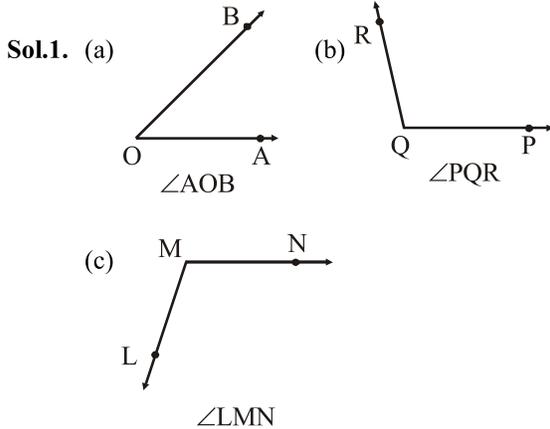
Sol.7. 

Sol.8. 



Case II : 6

Concept Recap 8.2



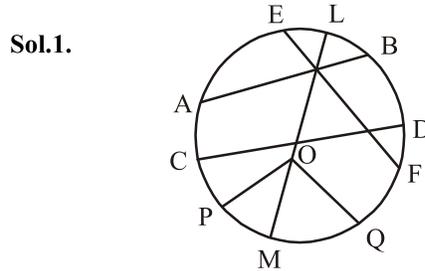
- Sol.2.** (a) Angles $\angle AOB$ or $\angle BOA$
Arms : OA and OB
Vertex : O
- (b) Angles $\angle PQR$ or $\angle RQP$
Arms : QR and QP
Vertex : Q
- (c) Angles : $\angle EOF$ or $\angle FOE$
Arms : OF or OE
Vertex : O
- Sol.3.** (a) Interior points = P
Exterior points = M, T, S, R
- (b) Interior points = L, M
Exterior points = A, N, J
- Sol.4.** (a) 3 ; $\angle COB, \angle COA, \angle BOA$
(b) 5 ; $\angle AOQ, \angle AOB, \angle BOQ, \angle BOP, \angle POA$

Concept Recap 8.3

- Sol.1.** (a) open figure (b) closed figure
(c) open figure (d) open figure
(e) closed figure (f) closed figure
(g) closed figure (h) open figure
- Sol.2.** (a) No (b) No (c) Yes (d) No
(e) Yes (f) Yes (g) No (h) Yes
- Sol.3.** (a) Triangle (b) Rectangle
(c) Square (d) Hexagon
- Sol.4.** (a) A polygon is a figure formed by line segments.
(b) A polygon formed by three line segments is called triangle.

- (c) A polygon formed by four line segments is called quadrilateral.
(d) A polygon formed by five line segments is called pentagon.
(e) A quadrilateral has 4 vertices and 4 sides.
(f) In a rectangle, opposite sides are equal.
(g) In a square all sides are equal.
(h) A triangle has 3 sides, 3 vertices and 3 angles.

Concept Recap 8.4



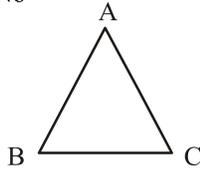
- (a) Centre = O
(b) radius = OP, OM, OQ, OC, OD, OL
(c) Chord = CD, AB, LM, EF
(d) diameter = CD, LM
- Sol.2.** (a) Diameter = $2 \times 18 \text{ cm} = 36 \text{ cm}$
(b) Diameter = $2 \times 20 \text{ cm} = 40 \text{ cm}$
(c) Diameter = $2 \times 23 \text{ cm} = 46 \text{ cm}$
(d) Diameter = $2 \times 48 \text{ cm} = 96 \text{ cm}$
- Sol.3.** (a) Radius = $\frac{40}{2} \text{ cm} = 20 \text{ cm}$
(b) Radius = $\frac{54}{2} \text{ cm} = 27 \text{ cm}$
(c) Radius = $\frac{66}{2} \text{ cm} = 33 \text{ cm}$
(d) Radius = $\frac{98}{2} \text{ cm} = 49 \text{ cm}$
- Sol.4.** (a) Diameter is 2 \times radius.
(b) Longest chord of the circle is diameter.
(c) All radii of a circle are of equal length.
(d) Point from where all points on the circle are at equal distance is called centre.

Interactive Practice

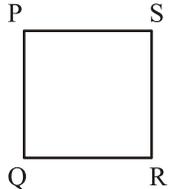
- Sol.1.** (a) point of intersection
(b) curved line
(c) perpendicular

- (d) equal
Sol.2. (a) No (b) Yes (c) Yes (d) No

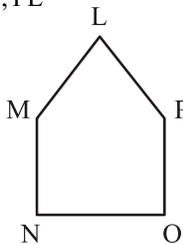
Sol.3. (a) Sides : AB, BC, CA
 Vertices : A, B, C



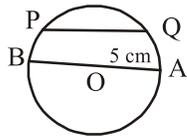
(b) Sides : PQ, QR, RS, SP
 Vertices : P, Q, R, S



(c) Sides : LM, MN, NO, OP, PL
 Vertices : L, M, N, O, P



Sol.4.



Sol.5. (a) No (b) Yes (c) No

Creative Corner

Do yourself

**Chapter-9
 Multiples and Factors**

Concept Recap 9.1

- Sol.1.** (a) Five multiples of 4 = 4, 8, 12, 16, 20
 (b) Four multiples of 9 = 9, 18, 27, 36
 (c) Six multiples of 12 = 12, 24, 36, 48, 60, 72
 (d) Eight multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80

- Sol.2.** (a) 7, 14, 21, 28, 35, 42, 49, 56
 (b) 8, 16, 24, 32, 40, 48, 56, 64

Sol.3. (a)
$$\begin{array}{r} 21 \\ 4 \overline{)84} \\ \underline{-8} \\ 04 \\ \underline{-4} \\ 0 \end{array}$$

(b)
$$\begin{array}{r} 72 \\ 8 \overline{)576} \\ \underline{-56} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

Here, remainder = 0
 So, 84 is a multiple of 4.

(c)
$$\begin{array}{r} 89 \\ 12 \overline{)1068} \\ \underline{-96} \\ 108 \\ \underline{-108} \\ 0 \end{array}$$

Here, remainder = 0
 So, 1068 is a multiple of 12.

- Sol.4.** (a) $12 \times 7 = 84$
 (b) $20 \times 8 = 160$

Concept Recap 9.2

- Sol.1.** (a) 5, 10, 15, 20, 25
 (b) 9, 18, 27, 36, 45
 (c) 10, 20, 30, 40, 50
 (d) 15, 30, 45, 60, 75

- Sol.2.** (a) Multiples of 2 = 2, 4, 6, 8, 10, 12,
 Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24,
 Multiples of 4 = 4, 8, 12, 16,

Common multiples = 12,
 Smallest common multiple = 12
 So, LCM of 2, 3 and 4 = 12

- (b) Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24,
 Multiples of 4 = 4, 8, 12, 16, 20, 24,
 Multiples of 6 = 6, 12, 18, 24,

Common multiples = 12, 24,
 Smallest common multiple = 12
 So, LCM of 3, 4 and 6 = 12

- (c) Multiples of 16 = 16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 240

Multiples of 20 = 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240,

Multiples of 24 = 24, 48, 72, 96, 120, 144, 168, 192, 216, 240

Common multiples = 240,
 Smallest common multiple = 240
 So, LCM of 16, 20, 24 = 240

Here, remainder = 0
 So, 576 is a multiple of 8.

(d)
$$\begin{array}{r} 236 \\ 19 \overline{)4484} \\ \underline{-38} \\ 068 \\ \underline{-57} \\ 114 \\ \underline{-114} \\ 0 \end{array}$$

Here, remainder = 0
 So, 4484 is a multiple of 19.

(d) Multiples of 18 = 18, 36, 54, 72, 90, 108, 126,
144, 162, 180, 198, 216, 234,
252, 270, 288, 306, 324, 342,
360

Multiples of 24 = 24, 48, 72, 96, 120, 144,
168, 192, 216, 240, 264,
288, 312, 336, 360

Multiples of 30 = 30, 60, 90, 120, 150, 180,
210, 240, 270, 300, 330,
360,

LCM = 360

Sol.3. (a) Multiples 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54,
60, 66, 72, 78

(b) Multiples 9 = 9, 18, 27, 36, 45, 54, 63, 72, 81

(c) Common multiples of 6 and 9 = 18, 36, 54, 72,

(d) LCM of 6 and 9 = 18

Concept Recap 9.3

Sol.1. (a) $20 \div 1 = 20$

$$20 \div 2 = 10$$

$$20 \div 4 = 5$$

$$20 \div 5 = 4$$

$$20 \div 10 = 2$$

$$20 \div 20 = 1$$

Thus, 1, 2, 4, 5, 10 and 20 are the factors of 20.

(b) $28 \div 1 = 28$

$$28 \div 2 = 14$$

$$28 \div 4 = 7$$

$$28 \div 7 = 4$$

$$28 \div 14 = 2$$

$$28 \div 28 = 1$$

Thus, 1, 2, 4, 7, 14 and 28 are the factors of 28.

(c) $54 \div 1 = 54$

$$54 \div 2 = 27$$

$$54 \div 3 = 18$$

$$54 \div 6 = 9$$

$$54 \div 18 = 3$$

$$54 \div 27 = 2$$

$$54 \div 54 = 1$$

Thus, 1, 2, 3, 6, 9, 18, 27, 54 are the factors of 54.

(d) $84 \div 1 = 84$

$$84 \div 2 = 42$$

$$84 \div 3 = 28$$

$$84 \div 4 = 21$$

$$84 \div 6 = 14$$

$$84 \div 7 = 12$$

$$84 \div 12 = 7$$

$$84 \div 14 = 6$$

$$84 \div 21 = 4$$

$$84 \div 28 = 3$$

$$84 \div 42 = 2$$

$$84 \div 84 = 1$$

Thus, 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84 are the factors of 84.

(e) $90 \div 1 = 90$

$$90 \div 2 = 45$$

$$90 \div 3 = 30$$

$$90 \div 5 = 18$$

$$90 \div 6 = 15$$

$$90 \div 9 = 10$$

$$90 \div 10 = 9$$

$$90 \div 15 = 6$$

$$90 \div 18 = 5$$

$$90 \div 30 = 3$$

$$90 \div 45 = 2$$

$$90 \div 90 = 1$$

Thus, 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45 and 90 are the factors of 90.

Sol.2. (a) $1 \times 27 = 27$

$$3 \times 9 = 27$$

$$9 \times 3 = 27$$

$$27 \times 1 = 27$$

So, 1, 3, 9, 27 are the factors of 27.

(b) $1 \times 42 = 42$

$$2 \times 21 = 42$$

$$3 \times 14 = 42$$

$$6 \times 7 = 42$$

$$7 \times 6 = 42$$

$$14 \times 3 = 42$$

$$21 \times 2 = 42$$

$$42 \times 1 = 42$$

So, the factors of 42 are 1, 2, 3, 6, 7, 14, 21, 42.

(c) $1 \times 56 = 56$

$$2 \times 28 = 56$$

$$4 \times 14 = 56$$

$$7 \times 8 = 56$$

$$8 \times 7 = 56$$

$$14 \times 4 = 56$$

$$28 \times 2 = 56$$

$$56 \times 1 = 56$$

So, the factors of 56 are 1, 2, 4, 7, 8, 14, 28, 56.

(d) $1 \times 72 = 72$

$$2 \times 36 = 72$$

$$3 \times 24 = 72$$

$$4 \times 18 = 72$$

$$6 \times 12 = 72$$

$$\begin{aligned}
8 \times 9 &= 72 \\
9 \times 8 &= 72 \\
12 \times 6 &= 72 \\
18 \times 4 &= 72 \\
24 \times 3 &= 72 \\
36 \times 2 &= 72 \\
72 \times 1 &= 72
\end{aligned}$$

So, the factors of 72 are 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72.

(e) $1 \times 96 = 96$
 $2 \times 48 = 96$
 $3 \times 32 = 96$
 $4 \times 24 = 96$
 $6 \times 16 = 96$
 $8 \times 12 = 96$
 $12 \times 8 = 96$
 $16 \times 6 = 96$
 $24 \times 4 = 96$
 $32 \times 3 = 96$
 $48 \times 2 = 96$
 $96 \times 1 = 96$

So, the factors of 96 are 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 96.

Sol.3. (a)
$$\begin{array}{r}
119 \\
16 \overline{) 1904} \\
\underline{-16} \\
30 \\
\underline{-16} \\
144 \\
\underline{-144} \\
0
\end{array}$$

Since, 1904 is completely divisible by 16, so 16 is a factor of 1904.

(b)
$$\begin{array}{r}
247 \\
24 \overline{) 5950} \\
\underline{-48} \\
115 \\
\underline{-96} \\
190 \\
\underline{-168} \\
22
\end{array}$$

Since, 5950 is not completely divisible by 24, so 24 is not a factor of 5950.

Concept Recap 9.4

Sol.1. Even numbers = 14, 26, 56, 62, 84

Sol.2. Odd numbers = 5, 11, 27, 35, 47, 63, 67, 73, 79

Sol.3. (a) 2, 3, 5, 7, 11, 13, 17, 19

(b) 11, 13, 17, 19, 23, 29

Sol.4. (a) 4, 6, 8, 9, 10, 12, 14

(b) 21, 22, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39

Sol.5. (a) 7, 19, 23, 31,

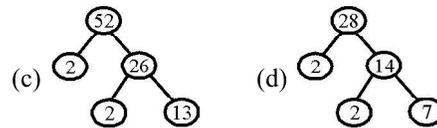
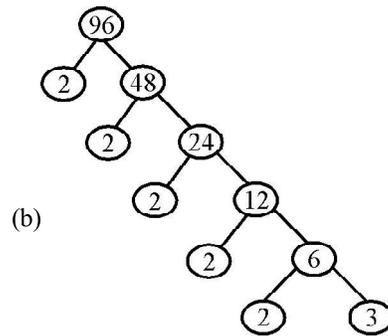
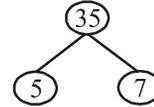
(b) 3, 13, 37

Sol.6. (a) 14, 52, 25

(b) 15, 26, 39, 50

Concept Recap 9.5

Sol.1. (a)



Sol.2. (a) Factors of 4 = 1, 2, 4

Factors of 10 = 1, 2, 5, 10

Common factors = 1, 2

(b) Factors of 9 = 1, 3, 9

Factors of 27 = 1, 3, 9, 27

Common factors = 1, 3, 9

(c) Factors of 12 = 1, 2, 3, 4, 6, 12

Factors of 20 = 1, 2, 4, 5, 10, 20

Common factors = 1, 2, 4

(d) Factors of 12 = 1, 2, 3, 4, 6, 12

Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36

Common factors = 1, 2, 3, 6

Sol.3. (a) Factors of 4 = 1, 2, 4

Factors of 6 = 1, 2, 3, 6

Common factors = 1, 2

HCF = 2

(b) Factors of 9 = 1, 3, 9

Factors of 15 = 1, 3, 5, 15

Common factors = 1, 3

HCF = 3

(c) Factors of 6 = 1, 2, 3, 6

Factors of 12 = 1, 2, 3, 4, 6, 12

Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24

Common factors = 1, 2, 3, 6

HCF = 6

(d) Factors of 25 = 1, 5, 25

Factors of 45 = 1, 3, 5, 9, 15, 45

Factors of 50 = 1, 5, 10, 25, 50

Common factors of = 1, 5

HCF = 5

Sol.4. (a) Factors of 81 = 1, 3, 9, 27, 81

Factors of 9 = 1, 3, 9

HCF = 9

LCM = 81

HCF \times LCM = $9 \times 81 = 729$

Product of numbers = $9 \times 81 = 729$

So, HCF \times LCM = product of numbers

(b) HCF \times LCM = product of numbers

= $15 \times 225 = 3375$

(c) HCF \times LCM = product of numbers

= $17 \times 102 = 1734$

(d) HCF \times LCM = product of numbers

= $12 \times 96 = 1152$

Sol.5. (a) Factors of 9 = 1, 3, 9

Factors of 12 = 1, 2, 3, 4, 6, 12

Common factors = 1, 3

Since, 9 and 12 have one more factors (3) other than 1, so 9 and 12 are not co-primes.

(b) Factors of 3 = 1, 3

Factors of 8 = 1, 2, 4, 8

Since, 3 and 8 do not have any factor common other than 1 so 3 and 8 are co-primes.

(c) Factors of 15 = 1, 3, 5, 15

Factors of 3 = 1, 3

Since, 15 and 3 have one more factors (3) other than 1, so 15 and 3 are not co-primes.

Concept Recap 9.6

Sol.1.

Numbers	Ones place	Divisible by 2
(a) 9404	4	Yes
(b) 7597	7	No
(c) 4050	0	Yes
(d) 8591	1	No

Sol.2.

Numbers	Sum of the digits	Divisible by 3
(a) 90162	$9 + 0 + 1 + 6 + 2 = 18$	Yes
(b) 12354	$1 + 2 + 3 + 5 + 4 = 15$	Yes
(c) 93612	$9 + 3 + 6 + 1 + 2 = 21$	Yes
(d) 28702	$2 + 8 + 7 + 0 + 2 = 19$	No

Sol.3.

Numbers	Ones place	Divisible by 5
(a) 9305	5	Yes
(b) 6340	0	Yes
(c) 1235	5	Yes
(d) 9336	6	No

Sol.4.

Numbers	Divisible by 2	Divisible by 3	Divisible by 6
(a) 12322	Yes	$1+2+3+2+2=10$ (No)	No
(b) 17076	Yes	$1+7+0+7+6=21$ (Yes)	Yes
(c) 15362	Yes	$1+5+3+6+2=17$ (No)	No
(d) 19284	Yes	$1+9+2+8+4=24$ (Yes)	Yes

Sol.5.

Numbers	Sum of the digits	Divisible by 9
(a) 71804	$7 + 1 + 8 + 0 + 4 = 20$	No
(b) 25074	$2 + 5 + 0 + 7 + 4 = 18$	Yes
(c) 23549	$2 + 3 + 5 + 4 + 9 = 23$	No
(d) 63027	$6 + 3 + 0 + 2 + 7 = 18$	Yes

Sol.6.

Numbers	Ones place	Divisible by 10
(a) 3570	0	Yes
(b) 46351	1	No
(c) 81530	0	Yes
(d) 913505	5	No

Interactive Practice

Sol.1. (a) Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24
Multiples of 4 = 4, 8, 12, 16, 20, 24
First two common multiples = 12, 24

Sol.2. (a) Factors of 15 = 1, 3, 5, 15
(b) Factors of 21 = 1, 3, 7, 21
(c) Factors of 30 = 1, 2, 3, 5, 6, 15, 30
(d) Factors of 56 = 1, 2, 4, 7, 8, 14, 28, 56

Sol.3. (a) 36, 38, 40, 42, 44, 46, 48, 50, 52, 54
(b) 40, 45, 50
(c) 40, 50

Sol.4. (a) 31, 37
(b) 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27, 28

Sol.5. (a) Factors of 28 = 1, 2, 4, 7, 14, 28
Factors of 42 = 1, 2, 3, 6, 7, 14, 21, 42
Common factors = 1, 2, 7, 14
(b) Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24
Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36
Common factors = 1, 2, 3, 4, 6, 12
(c) Factors of 18 = 1, 2, 3, 6, 9, 18
Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24
Common factors = 1, 2, 3, 6

(d) Factors of 25 = 1, 5, 25
Factors of 40 = 1, 2, 5, 8, 10, 20, 40
Common factors = 1, 5

Sol.6.
$$\begin{array}{r} 89 \\ 14 \overline{)1246} \\ \underline{-112} \\ 126 \\ \underline{-126} \\ 0 \end{array}$$

Since 1246 is completely divisible by 14, it is a factor of 1246.

Sol.7. (a) Factors of 14 = 1, 2, 7, 14
Factors of 42 = 1, 2, 3, 6, 7, 14, 21, 42
HCF = 14

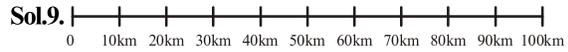
(b) Factors of 27 = 1, 3, 9, 27
Factors of 36 = 1, 2, 3, 6, 9, 12, 18, 36
HCF = 9

(c) Factors of 56 = 1, 2, 4, 7, 8, 14, 28, 56
Factors of 96 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 96
HCF = 8

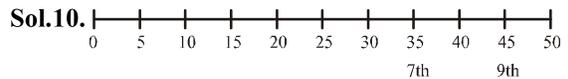
Sol.8. (a) Multiples of 6 = 6, 12, 18, 24, 30, 36,
Multiples of 9 = 9, 18, 27, 36,
LCM = 18

(b) Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24,
Multiples of 4 = 4, 8, 12, 16, 20, 24,
Multiples of 6 = 6, 12, 18, 24,
LCM = 12

(c) Multiples of 10 = 10, 20, 30, 40, 50, 60,
Multiples of 15 = 15, 30, 45, 60,
Multiples of 20 = 20, 40, 60,
LCM = 60



We see there are 4 petrol pumps on the highway between 50th and 100th km.



At 7th point the distance = 35 km

At 9th point the distance = 45 km

Creative Corner

Do yourself

Chapter-10 Fractions

Concept Recap 10.1

Sol.1. (a) Since, $\frac{3}{5} = \frac{3 \times 2}{5 \times 2} = \frac{3 \times 3}{5 \times 3} = \frac{3 \times 4}{5 \times 4} = \frac{3 \times 5}{5 \times 5}$
 $= \frac{6}{10} = \frac{9}{15} = \frac{12}{20} = \frac{15}{25}$

Thus, $\frac{6}{10}, \frac{9}{15}, \frac{12}{20}, \frac{15}{25}$ are four fractions equivalent to $\frac{3}{5}$.

(b) Since, $\frac{4}{7} = \frac{4 \times 2}{7 \times 2} = \frac{4 \times 3}{7 \times 3} = \frac{4 \times 4}{7 \times 4} = \frac{4 \times 5}{7 \times 5}$
 $= \frac{8}{14} = \frac{12}{21} = \frac{16}{28} = \frac{20}{35}$

Thus, $\frac{8}{14}, \frac{12}{21}, \frac{16}{28}, \frac{20}{35}$ are four fractions equivalent to $\frac{4}{7}$.

(c) Since, $\frac{5}{8} = \frac{5 \times 2}{8 \times 2} = \frac{5 \times 3}{8 \times 3} = \frac{5 \times 4}{8 \times 4} = \frac{5 \times 5}{8 \times 5}$
 $= \frac{10}{16} = \frac{15}{24} = \frac{20}{32} = \frac{25}{40}$

Thus, $\frac{10}{16}$, $\frac{15}{24}$, $\frac{20}{32}$, $\frac{25}{40}$ are four fractions equivalent to $\frac{5}{8}$.

$$(d) \text{ Since, } \frac{9}{11} = \frac{9 \times 2}{11 \times 2} = \frac{9 \times 3}{11 \times 3} = \frac{9 \times 4}{11 \times 4} = \frac{9 \times 5}{11 \times 5} \\ = \frac{18}{22} = \frac{27}{33} = \frac{36}{44} = \frac{45}{55}$$

Sol.2. Given, fraction = $\frac{5}{9}$

(a) To get 55 as numerator, we have to multiply the numerator and denominator by 11.

$$\frac{5}{9} = \frac{5 \times 11}{9 \times 11} = \frac{55}{99}$$

(b) To get denominator as 63, we have to multiply the denominator and numerator by 7.

$$\frac{5}{9} = \frac{5 \times 7}{9 \times 7} = \frac{35}{63}$$

Sol.3. (a) To get 7 as numerator, we have to divide numerator and denominator by 5.

$$\frac{35}{40} = \frac{35 \div 5}{40 \div 5} = \frac{7}{8}$$

(b) To get 8 as denominator, we have to divide denominators and numerator by 5.

$$\frac{35}{40} = \frac{35 \div 5}{40 \div 5} = \frac{7}{8}$$

Sol.4. (a) Given $\frac{6}{7}$ and $\frac{9}{21}$

$$6 \times 21 = 126$$

and $9 \times 7 = 63$

Since, $6 \times 21 \neq 9 \times 7$

Thus, $\frac{6}{7}$ and $\frac{9}{21}$ are not equivalent

(b) Here $\frac{2}{7}$ and $\frac{8}{28}$

$$2 \times 28 = 56$$

and $8 \times 7 = 56$

Since, $2 \times 28 = 8 \times 7$

So, $\frac{2}{7}$ and $\frac{8}{28}$ are equivalent

(c) Here $\frac{4}{9}$ and $\frac{36}{84}$

$$4 \times 84 = 336$$

and $9 \times 36 = 324$

Since, $4 \times 84 \neq 9 \times 36$

So, $\frac{4}{9}$ and $\frac{36}{84}$ are not equivalent

(d) Here $\frac{25}{45}$ and $\frac{10}{18}$

$$25 \times 18 = 450$$

and $45 \times 10 = 450$

Since, $25 \times 18 = 45 \times 10$

So, $\frac{25}{45}$ and $\frac{10}{18}$ are equivalent

Sol.5. (a) $\frac{5}{9}$ and $\frac{x}{81}$

$$x \times 9 = 5 \times 81$$

$$x = \frac{5 \times 81}{9} = \frac{405}{9} = 45$$

$$\text{So, } \frac{5}{9} = \frac{45}{81}$$

(b) $\frac{1}{2}$ and $\frac{x}{4}$

$$x \times 2 = 1 \times 4$$

$$x = \frac{1 \times 4}{2} = \frac{4}{2} = 2$$

$$\text{So, } \frac{1}{2} = \frac{2}{4}$$

(c) $\frac{4}{7}$ and $\frac{20}{x}$

$$4 \times x = 7 \times 20$$

$$x = \frac{140}{4} = 35$$

$$\text{So, } \frac{4}{7} = \frac{20}{35}$$

(d) $\frac{7}{35}$ and $\frac{x}{175}$

$$x \times 35 = 7 \times 175$$

$$x = \frac{1225}{35} = 35$$

$$\text{So, } \frac{7}{35} = \frac{35}{175}$$

Concept Recap 10.2

Sol.1. (a) $\frac{15}{18} = \frac{1 \times 3 \times 5}{1 \times 2 \times 3 \times 3}$

Since, 15 and 18 have 3 as common factor other than 1, So $\frac{15}{18}$ is not in the lowest form.

(b) $\frac{9}{11} = \frac{1 \times 9}{1 \times 11}$

Since, 9 and 11 have only one common factor 1, So $\frac{9}{11}$ is in the lowest form.

(c) $\frac{6}{9} = \frac{1 \times 2 \times 3}{1 \times 3 \times 3}$

Since, 6 and 9 have 3 as common factor other than 1, So $\frac{6}{9}$ is not in the lowest form.

(d) $\frac{14}{15} = \frac{1 \times 2 \times 7}{1 \times 3 \times 5}$

Since, 14 and 15 have only one common factor other 1, So $\frac{14}{15}$ is in the lowest form.

(e) $\frac{88}{91} = \frac{1 \times 2 \times 2 \times 2 \times 11}{1 \times 7 \times 13}$

Since, 82 and 91 have only one common factor 1, So $\frac{88}{91}$ is in the lowest form.

Sol.2. (a) Factors of 9 = 1, 3, 9

Factors of 15 = 1, 3, 5, 15

$$\text{HCF} = 3$$

Dividing the numerator and denominator by 3.

$$\frac{9}{15} = \frac{9 \div 3}{15 \div 3} = \frac{3}{5}$$

Thus, $\frac{3}{5}$ is the lowest form of $\frac{9}{15}$.

Alternate method:

$$\frac{9}{15} = \frac{1 \times 3 \times 3}{1 \times 3 \times 5} = \frac{1 \times 1 \times 3}{1 \times 1 \times 5} = \frac{3}{5}$$

(b) Factors of 9 = 1, 3, 9

Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24

$$\text{HCF} = 3$$

$$\therefore \frac{9}{24} = \frac{9 \div 3}{24 \div 3} = \frac{3}{8}$$

Thus, $\frac{3}{8}$ is the lowest form of $\frac{9}{24}$.

Alternate method :

$$\frac{9}{24} = \frac{1 \times 3 \times 3}{1 \times 2 \times 2 \times 2 \times 3} = \frac{1 \times 3 \times 1}{1 \times 2 \times 2 \times 2 \times 1} = \frac{3}{8}$$

(c) Factors of 16 = 1, 2, 4, 8, 16

Factors of 12 = 1, 2, 3, 4, 6, 12

$$\text{HCF} = 4$$

$$\therefore \frac{16}{12} = \frac{16 \div 4}{12 \div 4} = \frac{4}{3}$$

Thus, $\frac{4}{3}$ is the lowest form of $\frac{16}{12}$.

Alternate method :

$$\frac{16}{12} = \frac{1 \times 2 \times 2 \times 2 \times 2}{1 \times 2 \times 2 \times 3} = \frac{1 \times 2 \times 2}{1 \times 3} = \frac{4}{3}$$

(d) Factors of 49 = 1, 7, 49

Factors of 56 = 1, 2, 4, 7, 8, 14, 28, 56

$$\text{HCF} = 7$$

$$\therefore \frac{49}{56} = \frac{49 \div 7}{56 \div 7} = \frac{7}{8}$$

(e) Factors of 144 = 1, 2, 3, 4, 6, 8, 12, 16, 18, 24, 36, 72, 144

Factors of 180 = 1, 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 30, 36, 60, 90, 180

$$\text{HCF} = 36$$

$$\therefore \frac{144}{180} = \frac{144 \div 36}{180 \div 36} = \frac{4}{5}$$

Alternate method:

$$\frac{144}{180} = \frac{1 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3}{1 \times 2 \times 2 \times 3 \times 3 \times 5} = \frac{1 \times 2 \times 2}{1 \times 5} = \frac{4}{5}$$

Concept Recap 10.3

Sol.1. (a) Improper (b) proper

(c) unit (d) mixed

Sol.2. (a) Like fractions (b) Unlike fractions

(c) Unlike fractions (d) Like fractions

Sol.3. (a) Proper fraction (b) Proper fraction

(c) Unit fraction (d) Unit fraction

(e) Mixed fraction (f) Improper fraction

(g) Improper fraction (h) proper fraction

(i) Unit fraction (j) Unit fraction

- (k) Proper fraction (l) Improper fraction
 (m) Mixed fraction (n) Improper fraction
 (o) Mixed fraction (p) Improper fraction

Test Prep 10.4

Sol.1. (a) We have, $4\frac{1}{8} = \frac{4 \times 8 + 1}{8} = \frac{32 + 1}{8} = \frac{33}{8}$

(b) We have, $3\frac{7}{9} = \frac{3 \times 9 + 7}{9} = \frac{27 + 7}{9} = \frac{34}{9}$

(c) We have, $4\frac{4}{9} = \frac{4 \times 9 + 4}{9} = \frac{36 + 4}{9} = \frac{40}{9}$

(d) We have, $6\frac{4}{5} = \frac{6 \times 5 + 4}{5} = \frac{30 + 4}{5} = \frac{34}{5}$

Sol.2. (a) Dividing 15 by 7.

$$\begin{array}{r} 2 \\ 7 \overline{)15} \\ \underline{-14} \\ 1 \end{array}$$

quotient = 2, remainder = 1

$\therefore \frac{15}{7} = 2 + \frac{1}{7} = 2\frac{1}{7}$

(b) Dividing 19 by 5.

$$\begin{array}{r} 3 \\ 5 \overline{)19} \\ \underline{-15} \\ 4 \end{array}$$

$\therefore \frac{19}{5} = 3 + \frac{4}{5} = 3\frac{4}{5}$

(c) Dividing 31 by 4.

$$\begin{array}{r} 7 \\ 4 \overline{)31} \\ \underline{-28} \\ 3 \end{array}$$

$\therefore \frac{31}{4} = 7\frac{3}{4}$

(d) Dividing 38 by 9.

$$\begin{array}{r} 4 \\ 9 \overline{)38} \\ \underline{-36} \\ 2 \end{array}$$

$\therefore \frac{38}{9} = 4\frac{2}{9}$

Concept Recap 10.5

Sol.1. Here, numerators are same. The fraction with the smaller denominators is greater.

(a) $\frac{5}{10} > \frac{5}{12}$

(b) $\frac{4}{8} > \frac{4}{10}$

(c) $\frac{9}{12} > \frac{9}{24}$

(d) $\frac{8}{14} > \frac{8}{20}$

Sol.2. Here denominators are same. The fraction with the greater numerators is greater.

(a) $\frac{2}{16} < \frac{3}{16}$

(b) $\frac{8}{15} < \frac{9}{15}$

(c) $\frac{3}{9} < \frac{4}{9}$

(d) $\frac{12}{18} < \frac{13}{18}$

Sol.3. (a) LCM of 5 and 2 = $5 \times 2 = 10$

$\frac{3}{5} = \frac{3 \times 2}{5 \times 2} = \frac{6}{10}$

and $\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$

Since, $\frac{6}{10} > \frac{5}{10}$, So $\frac{3}{5} \boxed{>} \frac{1}{2}$

(b) LCM of 9 and 7 = $9 \times 7 = 63$

$\frac{1}{9} = \frac{1 \times 7}{9 \times 7} = \frac{7}{63}$

$\frac{2}{7} = \frac{2 \times 9}{7 \times 9} = \frac{18}{63}$ and

Since, $\frac{7}{63} < \frac{18}{63}$, So $\frac{1}{9} \boxed{<} \frac{2}{7}$.

(c) LCM of 21 and 20 = $21 \times 20 = 420$

$\frac{8}{21} = \frac{8 \times 20}{21 \times 20} = \frac{160}{420}$

and $\frac{7}{20} = \frac{7 \times 21}{20 \times 21} = \frac{147}{420}$

Since, $\frac{160}{420} > \frac{147}{420}$, So $\frac{8}{21} \boxed{>} \frac{7}{20}$.

(d) LCM of 9 and 23 = $9 \times 23 = 207$

$\frac{5}{9} = \frac{5 \times 23}{9 \times 23} = \frac{115}{207}$ and $\frac{20}{23} = \frac{20 \times 9}{23 \times 9} = \frac{180}{207}$

Since, $\frac{115}{207} < \frac{180}{207}$, So $\frac{5}{9} \boxed{<} \frac{20}{23}$.

Sol.4. (a) LCM of 3, 5 and 8 = $3 \times 5 \times 8 = 120$

$\frac{2}{3} = \frac{2 \times 5 \times 8}{3 \times 5 \times 8} = \frac{80}{120}$

$$\begin{array}{r|l} 5 & 5, 2 \\ \hline 2 & 1, 2 \\ \hline & 1, 1 \end{array}$$

$$\frac{4}{5} = \frac{4 \times 3 \times 8}{5 \times 3 \times 8} = \frac{96}{120}$$

$$\frac{3}{8} = \frac{3 \times 3 \times 5}{8 \times 3 \times 5} = \frac{45}{120}$$

Since, $\frac{45}{120} < \frac{80}{120} < \frac{96}{120}$, So $\frac{3}{8} < \frac{2}{3} < \frac{4}{5}$.

Thus, the ascending order is $\frac{3}{8}, \frac{2}{3}, \frac{4}{5}$.

(b) LCM of 9 and 7 = $9 \times 7 = 63$

$$\frac{1}{9} = \frac{1 \times 7}{9 \times 7} = \frac{7}{63}$$

$$\frac{3}{7} = \frac{3 \times 9}{7 \times 9} = \frac{27}{63}$$

$$\frac{2}{7} = \frac{2 \times 9}{7 \times 9} = \frac{18}{63}$$

Since, $\frac{7}{63} < \frac{18}{63} < \frac{27}{63}$, So $\frac{1}{9} < \frac{2}{7} < \frac{3}{7}$.

Thus, ascending order is $\frac{1}{9}, \frac{2}{7}, \frac{3}{7}$.

(c) LCM of 4, 6 and 12 = $2 \times 2 \times 3 = 12$

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

$$\frac{3}{6} = \frac{3 \times 2}{6 \times 2} = \frac{6}{12}$$

$$\frac{5}{12} = \frac{5 \times 1}{12 \times 1} = \frac{5}{12}$$

Since, $\frac{3}{12} < \frac{5}{12} < \frac{6}{12}$, So $\frac{1}{4} < \frac{5}{12} < \frac{3}{6}$.

Thus, ascending order is $\frac{1}{4}, \frac{5}{12}, \frac{3}{6}$.

Sol.5. (a) LCM of 4, 3 and 5 = $4 \times 3 \times 5 = 60$

$$\frac{1}{4} = \frac{1 \times 3 \times 5}{4 \times 3 \times 5} = \frac{15}{60}$$

$$\frac{2}{3} = \frac{2 \times 4 \times 5}{3 \times 4 \times 5} = \frac{40}{60}$$

$$\frac{3}{5} = \frac{3 \times 3 \times 4}{5 \times 3 \times 4} = \frac{36}{60}$$

Since, $\frac{40}{60} > \frac{36}{60} > \frac{15}{60}$, So $\frac{2}{3} > \frac{3}{5} > \frac{1}{4}$.

Thus, descending order is $\frac{2}{3}, \frac{3}{5}, \frac{1}{4}$.

(b) LCM of 6, 36 and 10 = $2 \times 2 \times 3 \times 3 \times 5 = 180$

$$\frac{3}{6} = \frac{3 \times 2 \times 3 \times 5}{6 \times 2 \times 3 \times 5} = \frac{90}{180}$$

$$\frac{9}{36} = \frac{9 \times 5}{36 \times 5} = \frac{45}{180}$$

$$\frac{1}{10} = \frac{1 \times 18}{10 \times 18} = \frac{18}{180}$$

Since, $\frac{90}{180} > \frac{45}{180} > \frac{18}{180}$, So $\frac{3}{6} > \frac{9}{36} > \frac{1}{10}$.

Thus, descending order is $\frac{3}{6}, \frac{9}{36}, \frac{1}{10}$.

(c) LCM of 6, 8 and 14 = $2 \times 2 \times 3 \times 2 \times 7 = 168$

$$\frac{5}{6} = \frac{5 \times 2 \times 2 \times 7}{6 \times 2 \times 2 \times 7} = \frac{140}{168}$$

$$\frac{7}{8} = \frac{7 \times 3 \times 7}{8 \times 3 \times 7} = \frac{147}{168}$$

$$\frac{13}{14} = \frac{13 \times 2 \times 2 \times 3}{14 \times 2 \times 2 \times 3} = \frac{156}{168}$$

Since, $\frac{156}{168} > \frac{147}{168} > \frac{140}{168}$, So $\frac{13}{14} > \frac{7}{8} > \frac{5}{6}$.

Thus, descending order is $\frac{13}{14}, \frac{7}{8}, \frac{5}{6}$.

Concept Recap 10.6

Sol.1. (a) $\frac{3}{6} + \frac{2}{6} = \frac{3+2}{6} = \frac{5}{6}$

(b) $\frac{5}{10} + \frac{2}{10} + \frac{2}{10}$
 $= \frac{5+2+2}{10} = \frac{9}{10}$

(c) $\frac{1}{16} + \frac{3}{16} + \frac{5}{16} = \frac{1+3+5}{16} = \frac{9}{16}$

$$\text{Sol.2. (a) } 2\frac{1}{7} + 3\frac{1}{7} = \frac{15}{7} + \frac{22}{7}$$

$$= \frac{15+22}{7} = \frac{37}{7} = 5\frac{2}{7}$$

$$\text{(b) } 9\frac{3}{8} + 2\frac{5}{8} + 4 = \frac{75}{8} + \frac{21}{8} + \frac{4 \times 8}{8}$$

$$= \frac{75+21+32}{8} = \frac{128}{8} = 16$$

$$\text{(c) } 2\frac{1}{7} + 1\frac{1}{7} + 3\frac{1}{7} = \frac{15}{7} + \frac{8}{7} + \frac{22}{7}$$

$$= \frac{15+8+22}{7} = \frac{45}{7} = 6\frac{3}{7}$$

Concept Recap 10.7

$$\text{Sol.1. (a) } \frac{8}{13} - \frac{6}{13} = \frac{8-6}{13} = \frac{2}{13}$$

$$\text{(b) } \frac{7}{9} - \frac{4}{9} = \frac{7-4}{9} = \frac{3}{9} = \frac{1 \times 3}{3 \times 3} = \frac{1}{3}$$

$$\text{(c) } \frac{5}{18} - \frac{4}{18} = \frac{5-4}{18} = \frac{1}{18}$$

$$\text{(d) } \frac{11}{20} - \frac{3}{20} = \frac{11-3}{20} = \frac{8}{20} = \frac{2 \times 2 \times 2}{2 \times 2 \times 5} = \frac{2}{5}$$

$$\text{Sol.2. (a) } 6\frac{3}{4} - 4\frac{1}{4} = \frac{27}{4} - \frac{17}{4} = \frac{27-17}{4}$$

$$= \frac{10}{4} = \frac{2 \times 5}{2 \times 2} = \frac{5}{2}$$

$$\text{(b) } 9\frac{1}{7} - 6\frac{1}{7} = \frac{64}{7} - \frac{43}{7} = \frac{64-43}{7}$$

$$= \frac{21}{7} = \frac{3 \times 7}{1 \times 7} = 3$$

$$\text{(c) } 8\frac{7}{12} - 5\frac{1}{12} = \frac{103}{12} - \frac{61}{12} = \frac{103-61}{12}$$

$$= \frac{42}{12} = \frac{2 \times 3 \times 7}{2 \times 2 \times 3} = \frac{7}{2} = 3\frac{1}{2}$$

$$\text{(d) } 9\frac{5}{36} - 7\frac{1}{36} = \frac{9 \times 36 + 5}{36} - \frac{7 \times 36 + 1}{36}$$

$$= \frac{324+5}{36} - \frac{252+1}{36} = \frac{329}{36} - \frac{253}{36}$$

$$= \frac{76}{36} = \frac{2 \times 2 \times 19}{2 \times 2 \times 3 \times 3} = \frac{19}{3 \times 3} = \frac{19}{9} = 2\frac{1}{9}$$

Concept Recap 10.8

$$\text{Sol.1. Total hours} = 7\frac{3}{8} + 6\frac{5}{8} + 9\frac{1}{8}$$

$$= \frac{59}{8} + \frac{53}{8} + \frac{73}{8} = \frac{59+53+73}{8}$$

$$= \frac{185}{8} = 23\frac{1}{8} \text{ hours.}$$

Sol.2. Total capacity of both containers

$$= \left(13\frac{1}{4} + 15\frac{1}{4}\right) \text{ litres}$$

$$= \left(\frac{53}{4} + \frac{61}{4}\right) \text{ litres}$$

$$= \left(\frac{53+61}{4}\right) \text{ litres} = \frac{114}{4} \text{ litres}$$

$$= \frac{57}{2} = 28\frac{1}{2} \text{ litres}$$

Sol.3. Total rice = $\frac{3}{4}$ kg

$$\text{Rice cooked} = \frac{1}{4} \text{ kg}$$

$$\text{Rice left} = \left(\frac{3}{4} - \frac{1}{4}\right) \text{ kg} = \left(\frac{3-1}{4}\right) \text{ kg}$$

$$= \frac{2}{4} \text{ kg} = \frac{1}{2} \text{ kg}$$

Sol.4. Cake eaten by Abhijit = $\frac{1}{4}$

$$\text{Cake eaten by Sumit} = \frac{3}{4}$$

$$\text{Here, } \frac{3}{4} > \frac{1}{4}.$$

$$\text{Difference} = \frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2}$$

Thus, Sumit ate $\frac{1}{2}$ more cake.

Sol.5. Total distance = $33\frac{3}{8}$ km = $\frac{267}{8}$ km

Distance travelled by bicycle and scooter

$$= \left(16\frac{1}{8} + 14\frac{3}{8}\right) \text{ km} = \left(\frac{129}{8} + \frac{115}{8}\right) \text{ km}$$

$$= \left(\frac{129+115}{8}\right) \text{ km} = \frac{244}{8} \text{ km}$$

Distance travelled on foot = $\left(\frac{267}{8} - \frac{244}{8}\right) \text{ km}$

$$= \left(\frac{267-244}{8}\right) \text{ km}$$

$$= \frac{23}{8} \text{ km} = 2\frac{7}{8} \text{ km}$$

Interactive Practice

Sol.1. Here, $\frac{6}{7} = \frac{6 \times 2}{7 \times 2} = \frac{6 \times 3}{7 \times 3} = \frac{6 \times 4}{7 \times 4} = \frac{6 \times 5}{7 \times 5}$

$$= \frac{12}{14} = \frac{18}{21} = \frac{24}{28} = \frac{30}{35}$$

Thus, four fractions equivalent to

$$\frac{6}{7} \text{ are } \frac{12}{14}, \frac{18}{21}, \frac{24}{28} \text{ and } \frac{30}{35}.$$

Sol.2. We have $\frac{2}{7} \not\sim \frac{x}{21}$

$$x \times 7 = 2 \times 21 \quad x = \frac{42}{7} = 6$$

So, $\frac{2}{7} = \frac{6}{21}$

Sol.3. $2\frac{11}{12} = \frac{2 \times 12 + 11}{12} = \frac{24 + 11}{12} = \frac{35}{12}$

Sol.4. $\frac{2}{5} \not\sim \frac{2}{9}$

Sol.5. Here, denominators are same.

Since, $1 < 2 < 5 < 7$

So, $\frac{1}{3} < \frac{2}{3} < \frac{5}{3} < \frac{7}{3}$

Thus, descending order is $\frac{1}{3}, \frac{2}{3}, \frac{5}{3}, \frac{7}{3}$.

Sol.6. Here, denominators are same.

Since, $7 > 5 > 3 > 2$

So, $\frac{7}{8} > \frac{5}{8} > \frac{3}{8} > \frac{2}{8}$

Thus, descending order is $\frac{7}{8}, \frac{5}{8}, \frac{3}{8}, \frac{2}{8}$.

Sol.7. Factors of 50 = 1, 2, 5, 10, 25, 50

Factors of 75 = 1, 3, 5, 15, 25, 75

HCF = 25

Dividing the numerator and denominator by HCF.

$$\frac{50}{75} = \frac{50 \div 25}{75 \div 25} = \frac{2}{3}$$

Factors of 80 = 1, 2, 4, 5, 8, 10, 16, 20, 40, 80

Factors of 100 = 1, 2, 4, 5, 10, 20, 25, 50, 100

HCF = 20

Dividing numerator and denominator by HCF.

$$\frac{80}{100} = \frac{80 \div 20}{100 \div 20} = \frac{4}{5}$$

Sol.8. (a) $2\frac{3}{5} + 1\frac{2}{5} = \frac{13}{5} + \frac{7}{5} = \frac{13+7}{5} = \frac{20}{5} = 4$

(b) $6\frac{7}{9} - 2\frac{5}{9} = \frac{61}{9} - \frac{23}{9} = \frac{61-23}{9} = \frac{38}{9} = 4\frac{2}{9}$

(c) $8\frac{1}{15} - 7\frac{2}{15} = \frac{121}{15} - \frac{107}{15} = \frac{121-107}{15} = \frac{14}{15}$

Sol.9. Total journey = $\frac{2}{11} + \frac{4}{11} + \frac{3}{11}$

$$= \frac{2+4+3}{11} = \frac{9}{11}$$

Sol.10. Total milk = 2 litres

Milk drank by him = $1\frac{1}{4}$ litres = $\frac{5}{4}$ litres

Milk left = $\left(2 - \frac{5}{4}\right)$ litres = $\frac{3}{4}$ litres

Creative Corner

Do yourself

Chapter-11

The Metric System of Measurement

Concept Recap 11.1

Sol.1. (a) $85 \text{ mm} = \frac{85}{10} \text{ cm} = 8.5 \text{ cm}$

(b) $17 \text{ m} = 17 \times 100 \text{ cm} = 1700 \text{ cm}$

(c) $40 \text{ m } 5 \text{ cm} = 40 \times 100 \text{ cm} + 5 \text{ cm}$
 $= 4000 \text{ cm} + 5 \text{ cm} = 4005 \text{ cm}$

Sol.2. (a) $370 \text{ cm} = \frac{370}{100} \text{ m} = 3.7 \text{ m}$

(b) $80 \text{ km } 5 \text{ m} = 80 \times 1000 \text{ m} + 5 \text{ m}$
 $= 80000 \text{ m} + 5 \text{ m} = 80005 \text{ m}$

(c) $12 \text{ km } 6 \text{ hm } 8 \text{ dam } 5 \text{ m} = 12 \times 1000 \text{ m} + 6 \times 100 \text{ m}$
 $+ 8 \times 10 \text{ m} + 5 \text{ m} = 12000 \text{ m} + 600 \text{ m} + 80 \text{ m} + 5 \text{ m} = 12685 \text{ m}$

Sol.3. (a) $108 \text{ kg} = 108 \times 1000 \text{ grams} = 108000 \text{ grams}$
 (b) $12 \text{ kg } 30 \text{ g} = 12 \times 1000 \text{ g} + 30 \text{ g} = 12000 \text{ g} + 30 \text{ g}$
 $= 12030 \text{ g}$
 (c) $20 \text{ kg } 5 \text{ hg } 8 \text{ dag } 6 \text{ g} = 20 \times 1000 \text{ g} + 5 \times 100 \text{ g}$
 $+ 8 \times 10 \text{ g} + 6 \text{ g} = 20000 \text{ g} + 500 \text{ g} + 80 \text{ g} + 6 \text{ g} = 20586 \text{ g}$

Sol.4. (a) $32 \text{ kL} = (32 \times 1000) \text{ L} = 32000 \text{ L}$
 (b) $102 \text{ kL } 8 \text{ L} = 102 \times 1000 \text{ L} + 8 \text{ L}$
 $= 102000 \text{ L} + 8 \text{ L} = 102008 \text{ L}$
 (c) $12 \text{ kL } 8 \text{ hl } 6 \text{ dal } 9 \text{ L}$
 $= 12 \times 1000 \text{ L} + 8 \times 100 \text{ L} + 6 \times 10 \text{ L} + 9 \text{ L}$
 $= 12000 \text{ L} + 800 \text{ L} + 60 \text{ L} + 9 \text{ L} = 12869 \text{ L}$

Sol.5. (a) $6 \text{ L } 250 \text{ mL} = 6 \times 1000 \text{ mL} + 250 \text{ mL}$
 $= 6000 \text{ mL} + 250 \text{ mL}$
 $= 6250 \text{ mL}$
 (b) $15 \text{ L } 140 \text{ mL} = 15 \times 1000 \text{ mL} + 140 \text{ mL}$
 $= 15000 \text{ mL} + 140 \text{ mL}$
 $= 15140 \text{ mL}$
 (c) $43 \text{ L } 3 \text{ mL} = 43 \times 1000 \text{ mL} + 3 \text{ mL}$
 $= 43000 \text{ mL} + 3 \text{ mL} = 43003 \text{ mL}$

Concept Recap 11.2

Sol.1. (a) $\begin{array}{r} \text{Kg} \quad \text{g} \\ 34 \quad 105 \\ + 4 \quad 864 \\ \hline 38 \quad 969 \end{array}$ (b) $\begin{array}{r} \text{Km} \quad \text{m} \\ 45 \quad 185 \\ + 5 \quad 764 \\ \hline 50 \quad 949 \end{array}$

(c) $\begin{array}{r} \text{Km} \quad \text{m} \\ 43 \quad 500 \\ - 28 \quad 230 \\ \hline 15 \quad 270 \end{array}$

Sol.2. (a) $\begin{array}{r} \text{Km} \quad \text{m} \\ 13 \quad 670 \\ 45 \quad 908 \\ + 29 \quad 770 \\ \hline 89 \quad 348 \end{array}$ (b) $\begin{array}{r} \text{KL} \quad \text{L} \\ 45 \quad 043 \\ 18 \quad 390 \\ + 55 \quad 900 \\ \hline 119 \quad 333 \end{array}$

Sol.3. (a) $\begin{array}{r} \text{Km} \quad \text{m} \\ 42 \quad 900 \\ - 31 \quad 706 \\ \hline 11 \quad 194 \end{array}$ (b) $\begin{array}{r} \text{Kg} \quad \text{g} \quad \text{mg} \\ 76 \quad 104 \quad 66 \\ - 52 \quad 300 \quad 45 \\ \hline 23 \quad 804 \quad 21 \end{array}$

Sol.4. $\begin{array}{r} \text{m} \quad \text{cm} \\ \text{Length of one rope} = 442 \quad 52 \\ \text{Length of another rope} = + 354 \quad 84 \\ \hline \text{Total length of ropes} = 797 \quad 36 \end{array}$

Sol.5. $\begin{array}{r} \text{L} \quad \text{mL} \\ 46 \quad 450 \\ 35 \quad 500 \\ + 56 \quad 706 \\ \hline \text{Total milk} = 138 \quad 656 \end{array}$

Interactive Practice

Sol.1. (a) $\begin{array}{r} \text{m} \quad \text{cm} \\ 15 \quad 56 \\ 22 \quad 85 \\ + 13 \quad 00 \\ \hline 51 \quad 41 \end{array}$ (b) $\begin{array}{r} \text{g} \quad \text{mg} \\ 100 \quad 530 \\ 250 \quad 002 \\ + \quad \quad 053 \\ \hline 350 \quad 585 \end{array}$

$$\begin{array}{r}
 \text{(c) L} \quad \text{mL} \\
 161\ 000 \\
 120\ 000 \\
 000\ 131 \\
 + 260\ 533 \\
 \hline
 541\ 664
 \end{array}$$

Sol. 2. (a) Km hm dam m (b) KL mL

$$\begin{array}{r}
 18\ 2\ 0\ 3 \quad 58\ 600 \\
 - 14\ 8\ 4\ 3 \quad -32\ 117 \\
 \hline
 3\ 3\ 6\ 0 \quad 26\ 483
 \end{array}$$

Sol. 3. Since, $100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} = 400\text{g}$
Thus, 4 weights of 100g.

Sol. 4. Sugar left in the bag = $5\text{kg} - 2\text{kg} = 3\text{kg}$

Sol. 5.

	m	mL
Oil in drum =	58	000
Oil sold =	- 24	005
Oil left =	<u>33</u>	<u>995</u>

Sol. 6.

	Km	m
Distance covered on foot =	12	160
Distance covered by bus =	25	610
Distance covered by car =	+ 48	000
Total distance covered =	<u>85</u>	<u>770</u>

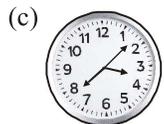
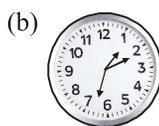
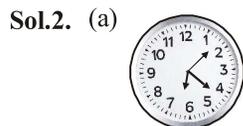
Creative Corner

Do yourself

Chapter-12 Time

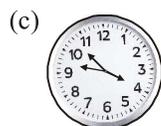
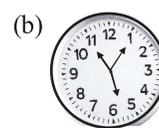
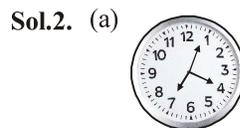
Concept Recap 12.1

- Sol. 1.** (a) 6 : 16; 16 minutes past 6
(b) 9 : 32; 32 minutes past 9
(c) 2 : 56; 56 minutes past 2



Concept Recap 12.2

- Sol. 1** (a) 5 : 48 : 22
(b) 7 : 16 : 36
(c) 9 : 26 : 43



Concept Recap 12.3

- Sol. 1.** (a) 15 day 3 hours
= 15×24 hours + 3 hours
= 360 hours + 3 hours
= 363 hours
(b) 16 day 8 hours
= 16×24 hours + 8 hours
= 384 hours + 8 hours
= 392 hours
(c) 20 day 9 hours
= 20×24 hours + 9 hours
= 480 hours + 9 hours
= 489 hours

Sol. 2. (a)
$$\begin{array}{r}
 6 \\
 24 \overline{)156} \\
 \underline{-144} \\
 12
 \end{array}$$

$$\begin{aligned}
 156 \text{ hours} &= (156 \div 24) \text{ days} \\
 &= 6 \text{ days } 12 \text{ hours}
 \end{aligned}$$

(b)
$$\begin{array}{r}
 8 \\
 24 \overline{)200} \\
 \underline{-192} \\
 8
 \end{array}$$

200 hours = 8 days 8 hours

$$(c) \begin{array}{r} 15 \\ 24 \overline{)360} \\ \underline{-24} \\ 120 \\ \underline{-120} \\ 0 \end{array}$$

360 hours = (360 ÷ 24) days
= 15 days

Sol.3. (a) 8 h 4 min
= 8 × 60 min + 4 min
= 480 min + 4 min
= 484 min

(b) 12 h 16 min
= 12 × 60 min + 16 min
= 720 min + 16 min
= 736 min

(c) 32 h 50 min
= 32 × 60 min + 50 min
= 1920 min + 50 min
= 1970 min

(d) 46 h 15 min
= 46 × 60 min + 15 min
= 2760 min + 15 min
= 2775 min

Sol.4. (a)
$$\begin{array}{r} 12 \\ 60 \overline{)720} \\ \underline{-60} \\ 120 \\ \underline{-120} \\ 0 \end{array}$$

720 min = 12 hours

(b)
$$\begin{array}{r} 4 \\ 60 \overline{)285} \\ \underline{-240} \\ 45 \end{array}$$

285 min = 4h 45min

(c)
$$\begin{array}{r} 15 \\ 60 \overline{)900} \\ \underline{-60} \\ 300 \\ \underline{-300} \\ 0 \end{array}$$

900 min = 15h

Sol.5. (a) 15 min 15 sec
= 15 × 60 sec + 15 sec
= 900 sec + 15 sec
= 915 sec

(b) 8 min 40 sec
= 8 × 60 sec + 40 sec
= 480 sec + 40 sec
= 520 sec

(c) 12 min 12 sec
= 12 × 60 sec + 12 sec
= 720 sec + 12 sec
= 732 sec

(d) 20 min 43 sec
= 20 × 60 sec + 43 sec
= 1200 sec + 43 sec
= 1243 sec

Sol.6. (a)
$$\begin{array}{r} 15 \\ 60 \overline{)900} \\ \underline{-60} \\ 300 \\ \underline{-300} \\ 0 \end{array}$$

(b)
$$\begin{array}{r} 3 \\ 60 \overline{)185} \\ \underline{-180} \\ 5 \end{array}$$

185 sec = 3min 5sec

900 sec = 15 min

(c)
$$\begin{array}{r} 6 \\ 60 \overline{)400} \\ \underline{-360} \\ 40 \end{array}$$

(d)
$$\begin{array}{r} 3 \\ 60 \overline{)235} \\ \underline{-180} \\ 55 \end{array}$$

400 sec = 6 min 40 sec 235 sec = 3 min 55 sec

Concept Recap 12.4

Sol.1. (a) 11 : 50 A.M. = 1150 hours
(b) 12 : 30 P.M. = 1230 hours
(c) 12 : 55 A.M. = 0055 hours
(d) 4 : 25 P.M.
= [(4 + 12) : 25] hours
= 1625 hours

- Sol.2.** (a) 2328 hours = [(23 - 12): 28] P.M. = 11:28 P.M.
 (b) 0632 hours = 6 : 32 A.M.
 (c) 0035 hours = 0 : 35 A.M.
 (d) 1250 hours = 12 : 50 P.M.

Concept Recap 12.5

- Sol.1.** (a) hours minutes

$$\begin{array}{r} 12 \quad 45 \\ + 15 \quad 55 \\ \hline 27 \quad 100 \end{array}$$

= 27 min + (1 min + 40 sec)
 = 28 min + 40 sec = 28 min 40 sec

- (b) hours minutes

$$\begin{array}{r} 40 \quad 30 \\ + 30 \quad 40 \\ \hline 70 \quad 70 \end{array}$$

= 70 min + (1 min + 10 sec)
 = 71 min + 10 sec = 71 min 10 sec

- Sol.2.** (a) minutes seconds (b) minutes seconds

$$\begin{array}{r} 55 \quad 50 \\ - 50 \quad 30 \\ \hline 5 \quad 20 \end{array} \qquad \begin{array}{r} 50 \quad 20 \\ - 40 \quad 45 \\ \hline 9 \quad 35 \end{array}$$

= 5 minutes 20 seconds = 9 minutes 35 seconds

- Sol.3.** (a) 3 hours after 6 : 30 A.M. = [(6 + 3) : 30] A.M.
 = 9 : 30 A.M.

- (b) 10 hours before 1 : 00 A.M. = 3 : 00 P.M.

- Sol.4.** Time duration = 10 : 10 A.M. to 11:55 A.M.
 = (10 : 10 to 11 : 00) A.M. + (11:00 to 11:55) A.M.
 = 50 min + 55 min
 = 105 min = 60 min + 45 min = 1 hour 45 min

- Sol.5.** Time duration = 3:25 P.M. to 6:55 P.M.
 = (3:25 to 4:00) P.M. + (4:00 to 6:00) P.M.
 + (6:00 to 6:55) P.M.
 = 35 min + 2 hours + 55 min
 = 2 hours + 90 min
 = 2 hours + 1 hour + 30 min = 3 hours 30 min

- Sol.6.** Time after 2 hours 15 minutes
 = 7:45 A.M. + 2 h 15 min
 = 9:60 A.M. = 10:00 A.M.

Thus, at 10:00 A.M., I will be in my office.

- Sol.7.** Time taken to reach Haridwar = 2128 hours
 - 1542 hours = 5 hours 46 minutes

- Sol.8.** Time duration = 9 A.M. to 6 P.M.
 = 9 A.M. to 12:00 Noon + 12:00 Noon to 6 P.M.
 = 3 hours + 6 hours = 9 hours

Concept Recap 12.6

Sol.1. (a)
$$\begin{array}{r} 503 \\ 4 \overline{)2012} \\ \underline{-20} \\ 012 \\ \underline{-12} \\ 0 \end{array}$$

Since, 2012 is completely divisible by 4, So 2012 is a leap year.

(b)
$$\begin{array}{r} 503 \\ 4 \overline{)2015} \\ \underline{-20} \\ 015 \\ \underline{-12} \\ 3 \end{array}$$

Here, remainder = 3
 Thus, 2015 is not a leap year.

(c)
$$\begin{array}{r} 505 \\ 4 \overline{)2022} \\ \underline{-20} \\ 022 \\ \underline{-20} \\ 2 \end{array}$$

Here, remainder = 2
 Thus, 2022 is not a leap year.

$$(d) \begin{array}{r} 506 \\ 4 \overline{)2024} \\ \underline{-20} \\ 024 \\ \underline{-24} \\ 0 \end{array}$$

Here, 2024 is completely divisible by 4, So 2024 is a leap year.

Sol.2. (a) Here, we want to find the no. of days between these two dates, So we exclude these two dates.

$$\begin{array}{r} \text{Days from 15th April to 30th April} = 16 \\ \text{Days from 1st May to 31st May} = 31 \\ \text{Days from 1st June to 30th June} = 30 \\ \text{Days from 1st July to 13th July} = + 13 \\ \text{Total days} = \underline{90} \end{array}$$

Thus, Number of days between 14th April to 14th July = 90

$$\begin{array}{r} (b) \text{Days from 23rd May to 31st May} = 9 \\ \text{Days from 1st June to 30th June} = 30 \\ \text{Days from 1st July to 31st July} = 31 \\ \text{Days from 1st August to 14th August} = + 14 \\ \text{Total days} = \underline{84} \end{array}$$

Thus, Here are 84 days between 22nd May and 15th August.

Sol.3. Date after 15 days from 15th Sep. = 29th Sep.
Thus, the teacher will join on 30th Sep.

$$\begin{array}{r} \text{No. of days from 15th August to 31st August} = 17 \\ \text{No. of days from 1st Sep. to 20th Sep.} = + 20 \\ \text{Total days} = \underline{37} \end{array}$$

$$\begin{array}{r} \text{No. of days from 17th June to 30th June} = 14 \\ \text{No. of days from 1st July. to 10th July} = + 10 \\ \text{Total days} = \underline{24} \end{array}$$

Sol.6. Date after 25 days from 10th May = 4rd June

Sol.7. Date before 20 days from 15th August = 27 July

Interactive Practice

Sol.1. (a) 4 hours after 6:30 A.M. = (6:30 + 4) A.M.
= 10:30 A.M.

(b) 4 hours after 8:15 P.M. = (8:15 + 4) P.M.
= 00:15 A.M.

(c) 4 hours after 2:57 P.M. = (2:57 + 4) P.M.
= 6:57 P.M.

Sol.2. (a) 2 hours before 6:15 A.M. = (6:15 - 2) A.M.
= 4:15 A.M.

(b) 2 hours before 10:25 P.M. = (10:25 - 2) P.M.
= 8:25 P.M.

(c) 2 hours before 6:45 P.M. = (6:45 - 2) P.M.
= 4:45 P.M.

Sol.3. (a) 12:05 P.M. to 7:30 P.M.
= 12:05 P.M. to 7:05 P.M. + 7:05 P.M. to 7:30 P.M.
= 7 hours + 25 minutes
= 7 hours 25 minutes

(b) 8:00 A.M. to 1:00 P.M.
= 8:00 A.M. to 12:00 Noon + 12:00 Noon to 1:00 P.M.
= 4 hours + 1 hour = 5 hours

Sol.4. (a) 7:30 A.M. to 8:15 A.M.
= 7:30 A.M. to 8:00 A.M. + 8:00 A.M. to 8:15 A.M.
= 30 minutes + 15 minutes = 45 minutes

(b) Quarter to two to quarter past two
= 1:45 to 2:15
= 15 min + 15 min = 30 minutes

Sol.5. hours minutes
$$\begin{array}{r} 4 \quad 26 \\ + \quad 5 \quad 30 \\ \hline 9 \quad 56 \end{array}$$

= 9 hours 56 minutes

Sol.6. hours minutes
$$\begin{array}{r} 10 \quad 12 \\ - \quad 7 \quad 28 \\ \hline 2 \quad 44 \end{array}$$

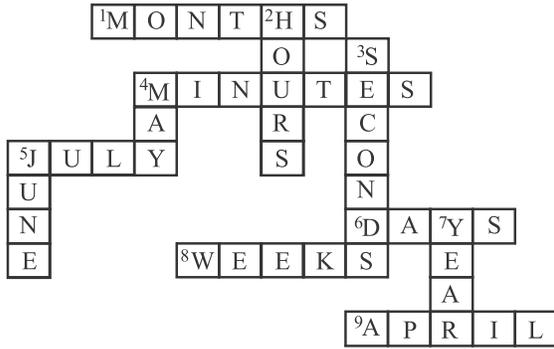
= 2 hours 44 minutes

Sol.7. 45 minutes after 5:10 A.M.
= (5:10 + 0:45) A.M.
= 5:55 A.M.
At 5:55 A.M. Vikas starts for school.

Sol.8. 1750 hours = (17 – 12) : 50 = 5:50 P.M.

Time of departure = 5:50 P.M.

Creative Corner



Chapter-13
Money

Concept Recap 13.1

Sol.1. (a) Seventeen rupees and ninety paise = ₹ 17.90

(b) Two hundred rupees and eight paise = ₹ 200.08

(c) Eleven rupees and five paise = ₹ 11.05

(d) Six paise = ₹ 0.06

Sol.2. (a) ₹ 76.50 = Seventy-six rupees and fifty paise

(b) ₹ 165.25 = One hundred sixty-five rupees and twenty-five paise

(c) ₹ 1008.85 = One thousand eight rupees and eighty-five paise

(d) ₹ 1.08 = One rupee and eight paise

Sol.3. (a) ₹ 85.05 = (85.05 × 100) p = 8505 p

(b) ₹ 5 = 5 × 100 p = 500 p

(c) ₹ 10.20 = 10.20 × 100 p = 1020 p

(d) ₹ 29.85 = 29.85 × 100 p = 2985 p

Sol.4. (a) 39 rupees 8 paise = 39 × 100 paise + 8 paise
= (3900 + 8) paise
= 3908 paise

(b) 62 rupees = 62 × 100 paise = 6200 paise

(c) 3 rupees 55 paise = 3 × 100 paise + 55 paise
= (300 + 55) paise
= 355 paise

Sol.5. (a) 506 paise = ₹ $\frac{506}{100}$ = ₹ 5.06

(b) 1355 paise = ₹ $\frac{1355}{100}$ = ₹ 13.55

(c) 4789 paise = ₹ $\frac{4789}{100}$ = ₹ 47.89

Concept Recap 13.2

Sol.1. (a) ₹	P	(b) ₹	P
647.50		268.45	
408.25		376.38	
+36.85		+439.62	
<hr/>		<hr/>	
1092.60		1084.45	

(c) ₹

P

2000.00

-625.48

1374.52

Sol.2. Cost of pencil = ₹ 6.40

Cost of eraser = ₹ 8.65

Cost of ink pen = ₹ 57.75

Total amount = ₹ $\frac{72.80}{}$

Sol.3. Cost of biscuits = ₹ 106.65

Cost of bread = ₹ 27.45

Cost of toffees = ₹ 8.95

Total cost = ₹ $\frac{143.05}{}$

Amount given to shopkeeper = ₹ 500.00

Total cost = ₹ 143.05

Amount Mitali gets back = ₹ $\frac{356.95}{}$

	₹	P	
Sol.4. Cost of a shirt	=	1265.	85
Cost of trousers	=	896.	45
Cost of an underwear	=	+78.	05
Total cost	=	<u>2240.</u>	<u>35</u>
		₹	P
Amount given to shopkeeper	=	2500.	00
Total cost	=	-2240.	35
Amount Kumkum gets back	=	<u>259.</u>	<u>65</u>

(c)
$$\begin{array}{r} 4090 \\ 12 \overline{)49080} \\ \underline{-48} \\ 108 \\ \underline{-108} \\ 00 \\ \underline{00} \\ 0 \end{array}$$

$\therefore 49080 \div 12 = 4090$
 $\text{₹} 490.80 \div 12 = \text{₹} 40.90$

(d)
$$\begin{array}{r} 10566 \\ 10 \overline{)105660} \\ \underline{-10} \\ 56 \\ \underline{-50} \\ 66 \\ \underline{-60} \\ 60 \\ \underline{-60} \\ 0 \end{array}$$

Concept Recap 13.3

Sol.1. (a)
$$\begin{array}{r} 4585 \\ \times 8 \\ \hline 36680 \end{array}$$

 $\therefore 4585 \times 8 = 36680$
 $\text{₹} 45.85 \times 8 = \text{₹} 366.80$

(b)
$$\begin{array}{r} 9076 \\ \times 45 \\ \hline 45380 \\ 363040 \\ \hline 408420 \end{array}$$

 $\therefore 9076 \times 45 = 408420$
 $\text{₹} 90.76 \times 45 = \text{₹} 4084.20$

(c)
$$\begin{array}{r} 41465 \\ \times 16 \\ \hline 248790 \\ 414650 \\ \hline 663440 \end{array}$$

 $\therefore 41465 \times 16 = 663440$
 $\text{₹} 414.65 \times 16 = \text{₹} 6634.40$

(d)
$$\begin{array}{r} 24606 \\ \times 20 \\ \hline 00000 \\ 492120 \\ \hline 492120 \end{array}$$

 $\therefore 24606 \times 20 = 492120$
 $\text{₹} 246.06 \times 20 = \text{₹} 4921.20$

Sol.2. (a)
$$\begin{array}{r} 875 \\ 6 \overline{)5250} \\ \underline{-48} \\ 45 \\ \underline{-42} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

 $\therefore 5250 \div 6 = 875$
 $\text{₹} 52.50 \div 6 = \text{₹} 8.75$

(b)
$$\begin{array}{r} 3738 \\ 8 \overline{)29904} \\ \underline{-24} \\ 59 \\ \underline{-56} \\ 30 \\ \underline{-24} \\ 64 \\ \underline{-64} \\ 0 \end{array}$$

 $\therefore 29904 \div 8 = 3738$
 $\text{₹} 299.04 \div 8 = \text{₹} 37.38$

$\therefore 105660 \div 10 = 10566$
 $\text{₹} 1056.60 = \text{₹} 105.66$

Sol.3. Cost of 1 kg of rice = ₹ 63.50
Cost of 15 kg of rice = ₹ 63.50 × 15
= ₹ 952.50

$$\begin{array}{r} 6350 \\ \times 15 \\ \hline 31750 \\ 63500 \\ \hline 95250 \end{array}$$

Sol.4. Cost of 1 calculator = ₹ 928.45
Cost of 16 calculators = ₹ 928.45 × 16
= ₹ 14855.20

$$\begin{array}{r} 92845 \\ \times 16 \\ \hline 557070 \\ 928450 \\ \hline 1485520 \end{array}$$

Sol.5. Cost of 10 kg of potatoes = ₹ 103.50
Cost of 1 kg of potatoes = ₹ 103.50 ÷ 10
= ₹ 10.35

$$\begin{array}{r}
 1035 \\
 10 \overline{)10350} \\
 \underline{-10} \\
 35 \\
 \underline{-30} \\
 50 \\
 \underline{-50} \\
 0
 \end{array}$$

Sol.6. Pocket money of 7 days = ₹ 320.25
 Pocket money of 1 day = ₹ 320.25 ÷ 7
 = ₹ 45.75

$$\begin{array}{r}
 4575 \\
 7 \overline{)32025} \\
 \underline{-28} \\
 40 \\
 \underline{-35} \\
 52 \\
 \underline{-49} \\
 35 \\
 \underline{-35} \\
 0
 \end{array}$$

Concept Recap 13.4

Sol.1.

Raj Provision Store Malviya Nagar, Jaipur			
S.No. 226		Date : 30.11.20	
Name : _____			
Quantity	Description	Rate	Amount
2 Kg	Ghee	₹ 725.45 per Kg	₹ 1450.90
10	Soap-cake	₹ 15.50 per piece	₹ 155.00
5 kg	Rice	₹ 81.50 per kg	₹ 407.50
3 kg	Sugar	₹ 48.50 per Kg	₹ 145.50
	Grand Total		₹ 2158.90

Sol.2 (a)

Big Bazar					
Bill.No. 216			Date : 04.10.20		
Name : _____					
S.No.	Description	Quantity	Rate Per item	Amount	
				₹	P
1.	Sugar	2 Kg	₹25 per kg	50	00
2.	Flour	3 Kg	₹15 per kg	45	00
3.	Butter	500 gm	₹160 per kg	80	00
	Total			175	00

(b)

Big Bazar					
Bill.No. 305			Date : 15.10.20		
Name : _____					
S.No.	Description	Quantity	Rate Per item	Amount	
				₹	P
1.	Rice	5 Kg	₹40/- kg	200	00
2.	Sugar	5 Kg	₹25/- kg	125	00
3.	Washing Powder	1 Kg	₹75/- kg	75	00
	Total			400	00

Interactive Practice

Sol.1. (a) 20 rupees 20 paise
 = 20 × 100 paise + 20 paise
 = 2000 paise + 20 paise
 = 2020 paise

(b) ₹ 50.08 = 50.08 × 100 p = 5008 p

Sol.2. (a) 88 p = ₹ (88 ÷ 100) = ₹ 0.88

(b) 347 p = ₹ (347 ÷ 100) = ₹ 3.47

(c) 3658 p = ₹ (3658 ÷ 100) = ₹ 36.58

(d) 8347 p = ₹ (8347 ÷ 100) = ₹ 83.47

Sol.3. (a) ₹ 225.20

+ ₹ 478.75

₹ 703.95

$$\begin{array}{r} \text{(b) ₹ 293.00} \\ - ₹ 276.25 \\ \hline ₹ 16.75 \end{array}$$

$$\begin{array}{r} \text{(c) } 10.40 \\ \quad \times 9 \\ \hline 93.60 \\ \hline \text{₹ } 10.40 \times 9 = \text{₹ } 93.60 \end{array}$$

$$\begin{array}{r} \text{(d) } 22 \overline{) 96580} \\ \underline{- 88} \\ 85 \\ \underline{- 66} \\ 198 \\ \underline{- 198} \\ 00 \\ \underline{- 00} \\ 0 \end{array}$$

$$\text{₹ } 965.80 \div 22 = \text{₹ } 43.90$$

Sol.4. Cost of one sack of sugar = ₹ 1276.75
 Cost of 5 sacks of sugar = ₹ 1276.75 × 5
 = ₹ 6383.75

$$\begin{array}{r} 1276.75 \\ \quad \times 5 \\ \hline 6383.75 \end{array}$$

Sol.5. Prize money distributed among 8 children = ₹ 868
 Prize money each child gets = ₹ 868 ÷ 8
 = ₹ 108.50

$$\begin{array}{r} 108.5 \\ 8 \overline{) 868.0} \\ \underline{- 8} \\ 68 \\ \underline{- 64} \\ 40 \\ \underline{- 40} \\ 0 \end{array}$$

Creative Corner

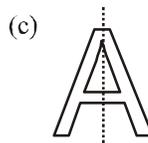
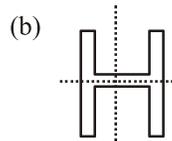
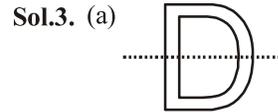
Do yourself

Chapter-14 Symmetry And Patterns

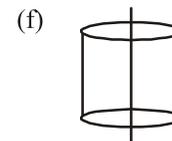
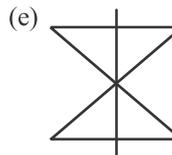
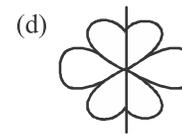
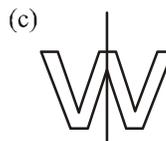
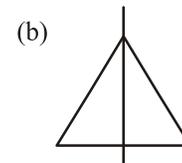
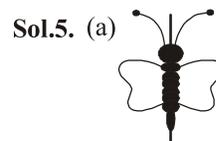
Concept Recap 14.1

Sol.1. (a) Yes (b) Yes (c) Yes (d) Yes (e) No (f) Yes

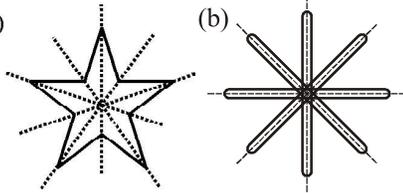
Sol.2. (a) Yes (b) No (c) No (d) Yes



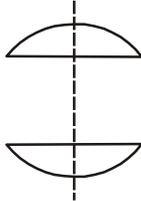
Sol.4. (a) Yes (b) No (c) Yes



Sol.6. (a)



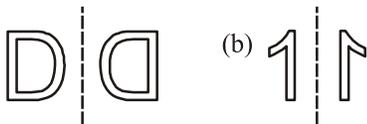
(c)



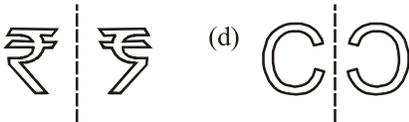
Sol.7. (a)(ii)

(b)(iii)

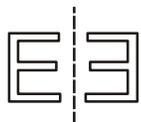
Sol.8. (a)



(c)



(e)



Concept Recap 14.2

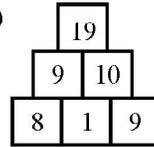
Sol.1. (a)



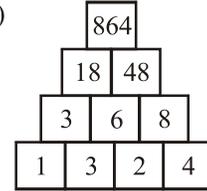
(b)



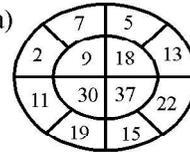
Sol.2. (a)



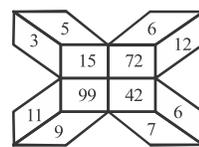
(b)



Sol.3. (a)



(b)



Sol.4. (a)

$1 + 2 + 3 + 4 = 10$

$7 + 8 + 9 + 10 = 34$

$3 + 4 + 5 + 6 = 18$

$6 + 7 + 8 + 9 = 30$

Rule : The sum is equal to twice the sum of two middle terms.

Sol.5. (a)

$65 \times 65 = 4225$

$505 \times 505 = 255025$

$195 \times 195 = 38025$

$345 \times 345 = 119025$

Sol.6. (a)

$7 \times 7 - 6 \times 6 = 7 + 6 = 13$

$8 \times 8 - 7 \times 7 = 8 + 7 = 15$

$9 \times 9 - 8 \times 8 = 9 + 8 = 17$

$10 \times 10 - 9 \times 9 = 10 + 9 = 19$

Sol.7. (a)

SAVE WATER
= 19012205 2301200518

BEST OF LUCK
= 02051920 1506 12210311

Sol.8. (a)

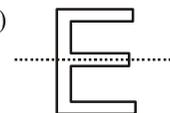
$02211202 = \text{BULB}$

$201516160518 = \text{TOPPER}$

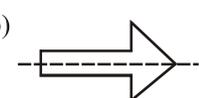
Interactive Practice

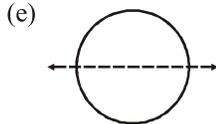
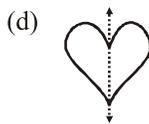
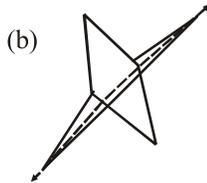
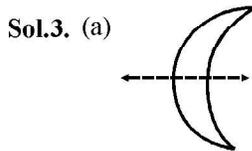
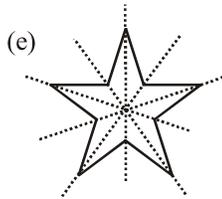
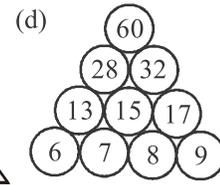
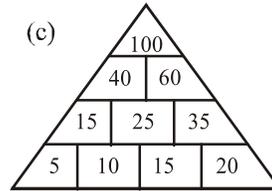
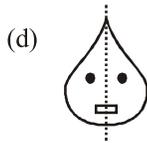
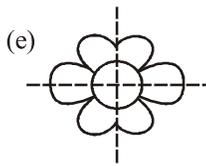
Sol.1. (a) No (b) Yes (c) No (d) Yes (e) No

Sol.2. (a)

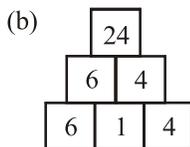
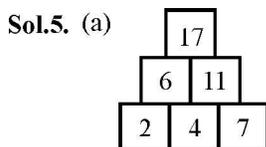


(b)





- Sol.4. (a) 95, 90, 85, 80, 75, 70, 65, 60
 (b) 1, 4, 9, 16, 25, 36, 49
 (c) 6, 12, 24, 48, 96, 192, 384
 (d) 98, 87, 76, 65, 54, 43, 32



- Sol.6. (a) FREEDOM = 06180505041513
 (b) HONESTY = 08151405192025
 (c) COUNTRY = 03152114201825
 Sol.7. (a) 0801161625 = HAPPY
 (b) 2008180505 = THREE
 (c) 0904091520 = IDIOT

Creative Corner

Do yourself

Chapter-15
Perimeter and Area

Corner Recap 15.1

Sol.1. (a) Perimeter = 40 cm + 6 cm + 40 cm + 6 cm
 = 92 cm

(b) Perimeter = $\left(2\frac{1}{2} + 3\frac{1}{2} + 2\frac{1}{2} + 3\frac{1}{2}\right)$ m

= $\left(\frac{5}{2} + \frac{7}{2} + \frac{5}{2} + \frac{7}{2}\right)$ m

= $\left(\frac{5+7+5+7}{2}\right)$ m

= $\frac{24}{2}$ m = 12 m

(c) Perimeter = (2 + 5 + 2 + 5) cm = 14 cm

Sol.2. Do yourself

Measure the sides of the given shapes with the help of scale and then add them.

Sol.3. Perimeter of field A = $11\text{ cm} + 12\text{ cm} + 16\text{ cm} + 6\text{ m}$
 $= 45\text{ cm}$

Perimeter of field B = $7\text{ m} + 2\text{ m} + 7\text{ m} + 7\text{ m} + 14\text{ m}$
 $+ 9\text{ m} = 46\text{ m}$

Since, $46\text{ m} > 45\text{ m}$, so perimeter of field B is greater than perimeter of field A.

Thus, field B has longer boundary.

Sol.4. (a) Perimeter = $(3 + 2 + 3 + 2 + 3 + 4 + 9 + 4)\text{ cm}$
 $= 30\text{ cm}$

(b) Perimeter = $(4 + 3 + 2 + 2 + 3 + 5)\text{ m} = 19\text{ cm}$

Sol.5. (a) Perimeter = $(8 + x + 8 + x)\text{ cm}$

$$50 = 16 + 2x$$

$$50 - 16 = 2x$$

$$x = \frac{34}{2} = 17\text{ cm}$$

Missing length = 17 cm

(b) Perimeter = $4 + 15 + x + 28$

$$78 = 47 + x$$

$$x = 78 - 47 = 31$$

Missing length = 31 cm

Sol.6. (a) Perimeter of $\triangle ABC = (6 + 7 + 5)\text{ cm}$
 $= 18\text{ cm}$

(b) Perimeter of $\triangle ABC = (4.5 + 2.3 + 7)\text{ cm}$
 $= 13.8\text{ cm}$

(c) Perimeter of $\triangle ABC = (4.2 + 4.2 + 4.2)\text{ cm}$
 $= 12.6\text{ cm}$

Sol.7. (a) Perimeter of rectangle = $2(\text{length} + \text{breadth})$
 $= 2(11 + 6)\text{ cm} = 2 \times 17\text{ cm} = 34\text{ cm}$

(b) Perimeter of rectangle = $2(\text{length} + \text{breadth})$
 $= 2(6 + 5)\text{ cm} = 22\text{ cm}$

Sol.8. Perimeter of a square = $4 \times \text{side}$

(a) Perimeter = $4 \times 4\text{ cm} = 16\text{ cm}$

(b) Perimeter = $4 \times 6\text{ cm} = 24\text{ cm}$

(c) Perimeter = $4 \times 507\text{ cm} = 2028\text{ cm} = 20\text{ m } 28\text{ cm}$

Sol.9. Distance covered in one round = perimeter of triangular park
 $= (90 + 120 + 150)\text{ m}$
 $= 360\text{ m}$

Distance covered in 4 rounds = $4 \times 360\text{ m}$
 $= 1440\text{ m}$

Sol.10. Perimeter of the field = $2(l + b) = 2(40 + 20)\text{ m}$
 $= 2 \times 60\text{ m} = 120\text{ m}$

No. of rounds = $\frac{600}{120} = 5$

Concept Recap 15.2

Sol.1. Area of rectangle = length \times breadth

(a) Area = $15.6 \times 10.5\text{ sq.m} = 163.8\text{ sq.m}$

(b) Area = $22.8 \times 14\text{ sq.m} = 319.20\text{ sq.m}$

Sol.2. Area of a square = side \times side

(a) Area = $16 \times 16\text{ sq.cm} = 256\text{ sq.cm}$

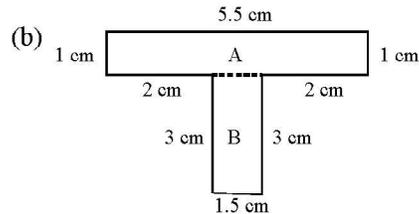
(b) Area = $22 \times 22\text{ sq.m} = 484\text{ sq.m}$

(c) Area = $45 \times 45\text{ sq.km} = 2025\text{ sq.km}$

(d) Area = $115 \times 115\text{ sq.m} = 13225\text{ sq.m}$

Sol.3. (a) No. of squares = 14

Area = 14 sq.cm



Length of A = 5.5 cm

Breadth of A = 1 cm

Area of A = $l \times b = 5.5 \times 1\text{ sq.cm}$

$= 5.5\text{ sq.cm}$

Length of B = 3 cm

Breadth of B = 1.5 cm

Area of B = $l \times b = 3 \times 1.5\text{ sq.cm} = 4.5\text{ sq.cm}$

Area of shapes = $(5.5 + 4.5)\text{ sq.cm} = 10\text{ sq.cm}$

Sol.4. (a) The shape covers 6 full squares and 4 half squares.

Area = $\left(6 + \frac{1}{2} \times 4\right)\text{ sq.unit} = (6 + 2)\text{ sq.unit}$

$= 8\text{ sq.unit}$

(b) The shape covers 8 full squares and 4 half squares.

$$\begin{aligned} \text{Area} &= \left(8 + \frac{1}{2} \times 4\right) \text{sq.unit} = (8 + 2)\text{sq.unit} \\ &= 10\text{sq. unit} \end{aligned}$$

Sol.5. Length = 260 m

Width = 225 m

$$\begin{aligned} \text{Area} &= \text{length} \times \text{width} \\ &= 260 \times 225 \text{ sq.m} \\ &= 58500 \text{ sq.m} \end{aligned}$$

Sol.6. Length = 16 cm, breadth = 10 cm

Length of frame = perimeter of frame

$$\begin{aligned} &= 2(l + b) = 2 \times (16 + 10) \text{ cm} \\ &= 2 \times 26 \text{ cm} = 52 \text{ cm} \end{aligned}$$

Sol.7. Side of square tile = 32 cm

$$\begin{aligned} \text{Area of square tile} &= \text{side} \times \text{side} \\ &= 32 \times 32 \text{ sq.cm} = 1024 \text{ sq.cm} \end{aligned}$$

Sol.8. Length of a side of frame = 48 cm

$$\begin{aligned} \text{Length of golden thread} &= 4 \times \text{side} = 4 \times 48 \text{ cm} \\ &= 192 \text{ cm} \end{aligned}$$

Interactive Practice

Sol.1. (a) Perimeter = $(10 + 10 + 17) \text{ cm} = 37 \text{ cm}$

$$\begin{aligned} \text{(b) Perimeter} &= (10 + 20 + 10 + 10 + 20 + 10) \text{ m} \\ &= 80 \text{ m} \end{aligned}$$

(c) Perimeter = $(5 + 6 + 1 + 2 + 4 + 4) \text{ cm} = 22 \text{ cm}$

Sol.2. (a) Perimeter = $5 + 10 + x$

$$\begin{aligned} 29 &= 15 + x \\ x &= 29 - 15 = 14 \text{ cm} \end{aligned}$$

Missing length = 14 cm

(b) Perimeter = $5 + 5 + 4 + x + 4$

$$\begin{aligned} 24 &= 18 + x \\ x &= 24 - 18 = 6 \text{ cm} \end{aligned}$$

Missing length = 6 cm

Sol.3. (a) Perimeter of shape = $(0.5 + 1 + 3 + 2 + 3.5 + 3) \text{ cm} = 13.5 \text{ cm}$

(b) Perimeter of shape = $(2 + 1 + 2 + 1 + 2 + 2 + 6 + 4) = 20 \text{ cm}$

Thus, shape (b) has bigger perimeter.

Sol.4. Length = 3m, breadth = 2m

$$\begin{aligned} \text{Area} &= \text{length} \times \text{breadth} = 3 \times 2 \text{ sq.m} = 6 \text{ sq.m} \\ \text{Perimeter} &= 2(\text{length} + \text{breadth}) = 2(3 + 2)\text{m} \\ &= 2 \times 5\text{m} = 10\text{m} \end{aligned}$$

Sol.5. Side = 30 cm

$$\begin{aligned} \text{Length of the frame} &= \text{perimeter of square frame} \\ &= 4 \times \text{side} = 4 \times 30 \text{ cm} = 120 \text{ cm} \end{aligned}$$

Sol.6. Length = 96m, breadth = 64 m

$$\begin{aligned} \text{Length of wire needed} &= \text{perimeter of park} \\ &= 2(l + b) \\ &= 2(96 + 64) \text{ m} \\ &= 2 \times 160 \text{ m} = 320 \text{ m} \end{aligned}$$

$$\begin{aligned} \text{Cost of fencing at the rate of ₹ 4 per metre} \\ &= ₹(4 \times 320) = ₹1280 \end{aligned}$$

Creative Corner

Do yourself

Chapter-16 Data Handling

Concept Recap 16.1

Sol.1. (a) Scale : 1 \odot = 6 students

$$\text{No. of symbols for bicycle} = \frac{54}{6} = 9$$

$$\text{No. of symbols for car} = \frac{18}{6} = 3$$

$$\text{No. of symbols for bus} = \frac{30}{6} = 5$$

$$\text{No. of symbols for walking} = \frac{48}{6} = 8$$

$$\text{No. of symbols for scooter} = \frac{72}{6} = 12$$

We have the following pictograph:

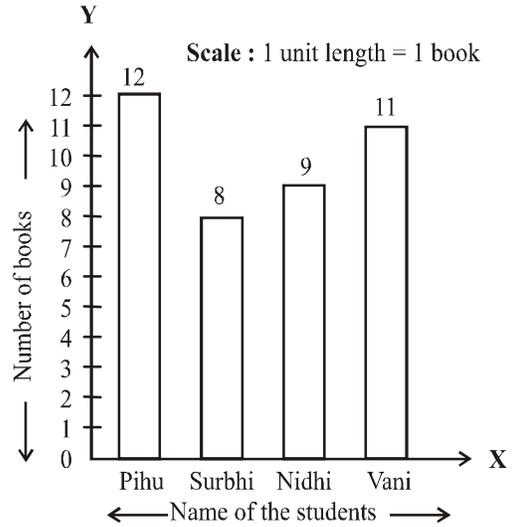
Concept Recap 16.2

Modes	No. of students
Bicycle	☺☺☺☺☺☺☺☺☺☺
Car	☺☺☺
Bus	☺☺☺☺☺
Walking	☺☺☺☺☺☺☺☺☺☺
Scooter	☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺

Sol.1.

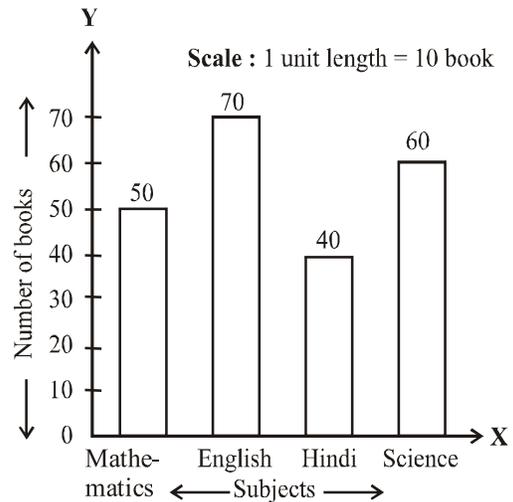
(b) Scale : 1☺ = 5 students

Game	No. of students
Football	☺☺☺☺☺☺☺☺☺☺
Cricket	☺☺☺☺☺☺☺☺☺☺☺☺
Badminton	☺☺☺☺☺☺☺☺☺☺
Volleyball	☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺
Basketball	☺☺☺☺☺☺☺☺☺☺



- Sol.2.** (a) No. of symbols for Honda cars = 5
 No. of staff members using Honda cars
 $= 5 \times 10 = 50$
- (b) Toyota
- (c) No. of members using Hyundai = $3 \times 10 = 30$
 No. of members using Ford = $2 \times 10 = 20$
 Difference = $30 - 20 = 10$
- (d) The repaired increasing order of the popularity of cars is:
 Toyota < Ford < Hyundai < Honda < Maruti

Sol.2.



- Sol.3.** (a) 5
 (b) 40
 (c) Cricket
 (d) Badminton

Concept Recap 16.3

Sol.1.

Marks	Tally Marks	Number
2	I	1
3	I	1
4	II	2
5	I	1
6	III	4
7	II	2
8	I	1

- Sol.2.** (a) 12 (b) Movie

Concept Recap 16.4

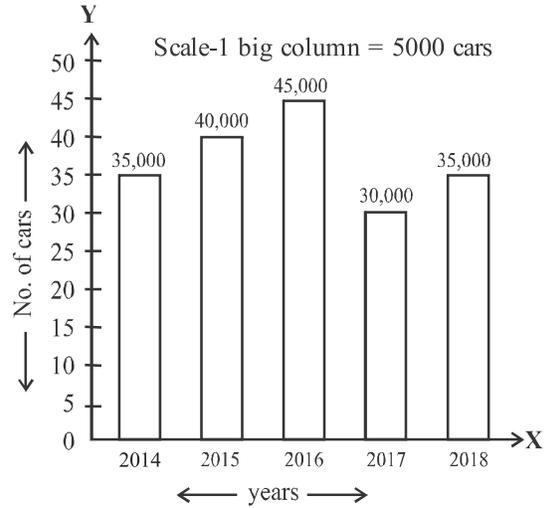
- Sol.1.** (a) Car (b) 30
 (c) No. of students = $40 - 10 = 30$

- Sol.2.** (a) Dhokla
 (b) Makke ki roti and sarson ka sag
 (c) Pulses and Roti (d) Pulses and Roti

Interactive Practice

- Sol.1.** (a) Maths (b) Sanskrit
Sol.2. (a) 5 (b) Lady finger
 (c) Brinjal

Sol.3.



- Sol.4.** (a) 5 (b) 20 (c) Pink (d) Red

Creative Corner

Do yourself



