Math-3

CHAPTER-1
Rapid Refresh

Exercises (Check Yourself) [Page No. 5]

1. (a) Five hundred seventy six

(b) Three hundred thirteen

(c) Four hundred seventeen

(d) Eight hundred twenty nine

2. (a) 678 **(b)** 111

(c) 710 **(d)** 217

3. (a) 736 → 700 + 30 + 6

(b) 317 → 300 + 10 + 7

(c) 430 → 400 + 30 + 0

(d) 695 → 600 + 90 + 5

4. (a) 292 **(b)** 847

(c) 628 **(d)** 439

5. (a) 701 < 800 **(b)** 823 < 987

(c) 785 > 765 **(d)** 403 = 403

6. (a) 210, 601, 160, (610) , 606

(b) 535

7. (a) 909, 925, 945, 963, 999

(b) 498, 564, 648, 664, 746

8. 171, 174, 177, 180, 183, 186, 189

9. 180, 108, 810, 801

10. 3 6 4

4 × 1 = 4

6 × 10 = 60

3 × 100 = 300

11. (a) 685 **(b)** 399

(c) 40 **(d)** 3

12. (a) 9 O' clock , 9:00

(b) 4 O' clock , 4:00

(c) 2 O' clock, 2:00

13. No. of men = 1500

Number of women = 1378

Number of children = +112

Population of village = 2990

Hence the population of the village is 2990.

14. (a) Cuboid **(b)** Cube

(c) Sphere **(d)** Cone.

15. (a) Cube

(b) Cone

(c) Cylinder

16. Kana gave money to Joy → ₹ 325

Kana gave money to prachi → + ₹ 272

Total Money he gave ₹ 597

17. 29 days

CHAPTER-2
Number system

Rapid Refresh - 1 [Page No. 10]

1. (a) 3279 **(b)** 9492

2. (a) four thousand two hundred thirteen.

(b) Nine thousand six hundred seventy two.

3. (a) 8 4 2 5

5 × 1 = 5

2 × 10 = 20

4 × 100 = 400

8 × 1000 = 8000

(b) 1 3 6 5

5 × 1 = 5

6 × 10 = 60

3 × 100 = 300

1 × 1000 = 1000

4. (a) Place value of 1 = 100

face value of 1 = 1

(b) Place value of 6 = 6

face value of 6 = 6

(c) Place value of 7 = 7000

face value of 7 = 7

(d) Place value of 0 = 0

face value of 0 = 0

5. **(a)** 4,275 → 4000 + 200 + 70 + 5
(b) 2,329 → 2000 + 300 + 20 + 9
(c) 4,327 → 4000 + 300 + 20 + 7
(d) 7,819 → 7000 + 800 + 10 + 9

6. **(a)** 3,605 **(b)** 4,629

Rapid Refresh - 2 **[Page No. 11]**

1. **(a)** 403 < 430 **(b)** 1120 < 1150
(c) 6007 > 607 **(d)** 2001 < 2010
(e) 60 + 4 = 64 **(f)** 9 – 9 < 30
(g) 50 + 5 = 60 –5 **(h)** 3596 < 6497

2. **(a)** 8800 > 7788 **(b)** 2578 < 2579
(c) 5728 > 5287 **(d)** 8008 < 8018
(e) 9617 > 1694 **(F)** 7270 > 2675

Rapid Refresh - 3 **[Page No. 13]**

1. **(a)** 5770 **(b)** 1003
(c) 3265 **(d)** 3577

2. **(a)** 6345 **(b)** 9691
(c) 6521 **(d)** 6401

3. **(a)** 5261, 2651, 1625, 1516,
(b) 3602, 3062, 402, 206

4. **(a)** 199, 1009, 1090, 1990
(b) 574, 1375, 1573, 3457

Rapid Refresh - 4 **[Page No. 14]**

1.

	Greatest 4 digit Number	Smallest 4 digit Number
a.	9531	1359
b.	7620	2067
c.	9854	4589
d.	7631	1367

2. **(a)** Greatest Number → 5432
Smallest Number → 2345
(b) Greatest Number → 9832
Smallest Number → 2389
(c) Greatest Number → 8761
Smallest Number → 1678

Rapid your skill **[Page No. 14]**

1. **(a)** 700
(b) 3
(b) 7000

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.

3. **(a)** 6,209 **(b)** 7,091
(c) 2,004 **(d)** 8,202

4. **(a)** 2472 → 2000 + 400 + 70 + 2
(b) 3362 → 3000 + 300 + 60 + 2
(c) 7052 → 7000 + 00 + 50 + 2

5. **(a)** (3061) , 7933, 4371, 9210 (✓)
(b) 4707 (✓), 3035, (1279) , 2899

6. **(a)** 1080
(b) 9806
(c) 7642

7. **(a)** 193 < 931
(b) 2889 < 2898
(c) 8018 = 8000 + 10 + 8
(d) 300 < Three hundred ninety
(e) 8206 > Eight thousand twenty six
(f) 3756 < 4000 + 10

8. **(a)** 2197, 2864, 2913, 2984
(b) 4318, 5497, 6412, 7999

9. **(a)** 6890, 2766, 525, 301
(b) 6789, 5678, 5457, 3435

10. Greatest Number → 9710
Smallest Number → 1079

Puzzle Time **[Page No. 15]**

1. Ones digit → 3
Tens digit → 3 + 3 = 6
hundreds digit → 3 – 3 = 0
Thousands digit → 6 + 3 = 9
Hence the number is → = 9063

2. Thousands digit ⇒ Number of legs a tiger has = 4
Hundreds digit ⇒ Number of tails a monkey has = 1
Tens digit ⇒ Half a dozen = 6
Ones digit ⇒ Number of tyre a bike has = 2
Hence the number is → 4162

3. The number is 60

because sum of the digit of the number is

$\rightarrow 6 + 0 = 6$

Product of the digit of the number is

$\rightarrow 6 \times 0 = 0$

Real life connection **[Page No. 16]**

1. (a) 8432

(b) 4245, 6889, 8009, 8432

2. It is important to save trees and plant more trees because.

(i) They give us oxygen.

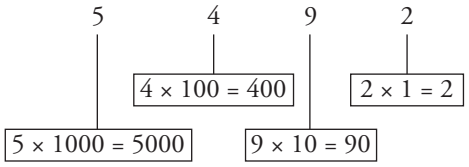
(ii) They absorb Carbon dioxide

(iii) They help to prevent global worming

(iv) They help in soil conservation.

Hand - on- atrocity **[Page No. 16]**

1.



2. (a) 90 **(b)** 1000

(c) Three (3) **(d)** 900

(e) 800 **(f)** 100

CHAPTER-3
Addition

Rapid Refresh - 1 **[Page No. 18]**

1. (a) 2873 + 4086 = 4086 + 2873

(b) 3461 + 5982 = 5982 + 3461

(c) 5580 + 2264 = 2264 + 5580

(d) 7492 + 3367 = 3367 + 7492

2. (a) 495 + 0 = 495

(b) 0 + 83 = 83

(c) 0 + 5601 = 5601

(d) 4441 + 0 = 4441

(e) 235 + (628 + 902) = (235 + 628) + 902

(f) 98 + (4025 + 2867) = (98 + 4025) + 2867

Rapid Refresh - 2 **[Page No. 21]**

1. (a) 8778

(b) 9988

(c) 9968

2. (a)

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

(b)

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

(c)

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

3. (a)

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

(b)

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

(c)

	Th	H	T	O
	②	①	①	
	6	8	7	9
		4	6	6
+		7	3	4
	8	0	7	9

(d)

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

(e)

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

(f)

	Th	H	T	O
	②	②	①	
	1	9	8	6
	4	7	9	7
			3	0
+		8	7	0
	7	6	8	3

Rapid Refresh - 3 **[Page No. 22]**

1.

No. of women	= 2654
No. of men	= 3729
Total people went to see the match	= 6383

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

2.

		Th	H	T	O
		①	①	①	
Number of visitors on Monday →		2	3	5	8
Number of visitors on Tuesday →	+	3	9	4	6
Total Number of visitors visited the museum in two days.		6	3	0	4

3.

		Th	H	T	O
		①		①	
Number of bag of rice in one store →		4	5	6	3
Number of bag of rice in another store →	+	4	8	0	8
Total Number of bag of rice →		9	3	7	1

4.

		Th	H	T	O
		①	①	①	
No. of men →		3	5	6	2
No. of women →		2	5	0	6
No. of children →	+	1	2	9	5
Population of the town		7	3	6	3

5.

		Th	H	T	O
		①	①	①	
Number of mangoes →		4	5	6	3
Number of bananas→		3	6	4	5
Number of pineapple →	+	1	5	0	8
Total No. of fruits		9	7	1	6

Rapid Refresh - 4 **[Page No. 24]**

1. Now let's solve the Problem—

		Th	H	T	O
		①	①	①	
Number of Red balloons →		1	0	1	7
Number of White balloons →		1	5	9	3
Number of Pink balloons →	+	1	6	1	2
Total Number of balloons		4	2	2	2

2. Now let's solve the problem—

		Th	H	T	O
			①	①	
Number of English School books →		4	3	0	5
Number of Hindi School books →		1	0	4	9
Number of both books →	+	3	4	6	1
Total number of School books		8	8	1	5

3. Now let's solve the problem—

		Th	H	T	O
			①	①	
Distance travelled on first day →		2	4	9	5
Distance travelled on second day →		3	4	1	6
Total distance travelled in two days		5	9	1	1

Rapid Refresh - 5 **[Page No. 25]**

1. (a) Actual Sum → 2431 + 4006 = 6437

Estimated Sum → 2431 → 2400

4006 → 4000

Estimated Sum → 6400

(b) Actual Sum → 1517 + 2005 = 3522

Estimated Sum → 1517 → 1500

2005 → 2000

Estimated Sum → 3500

(c) Actual Sum → 7312 + 1002 = 8312

Estimated Sum → 7312 → 7300

1002 → 1000

Estimated Sum → 8300

(d) Actual Sum → 3473 + 3001 = 6474

Estimated Sum → 3473 → 3500

3001 → 3000

Estimated Sum → 6500

(e) Actual Sum → 1358 + 1000 = 2358

Estimated Sum → 1358 → 1400

1000 → 1000

Estimated Sum → 2400

(f) Actual Sum → 2116 + 1000 → 3116

Estimated Sum → 2116 → 2100

1000 → 1000

Estimated Sum → 3100

(g) Actual Sum → 4217 + 3000 → 7217

Estimated Sum → 4217 → 4200

3000 → 3000

Estimated Sum → 7200

(h) Actual Sum → 6006 + 2000 → 8006

Estimated Sum → 6006 → 6000

2000 → 2000

Estimated Sum → 8000

2. (a) Actual Sum → 1158 + 6224 = 7379

Estimated Sum → 1158 → 1000

6221 → 6000

Estimated Sum → 7000

(b) Actual Sum → 1183 + 2873 → 4056

Estimated Sum → 1183 → 1000

2873 → 3000

Estimated Sum → 4000

(c) Actual Sum → 1302 + 2873 → 4175

Estimated Sum → 1302 → 1000

2873 → 3000

Estimated Sum → 4000

(d) Actual Sum → 1669 + 1498 → 3167

Estimated Sum → 1669 → 2000

1498 → 1000

Estimated Sum → 3000

(e) Actual Sum → 4511 + 6721 → 11232

Estimated Sum → 4511 → 5000

6721 → 7000

Estimated Sum → 12000

(f) Actual Sum → 2899 + 3101 → 6000

Estimated Sum → 2899 → 3000

3101 → 3000

Estimated Sum → 6000

Reffect your skills **[Page No. 26]**

1. (a)

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

(b)

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

(c)

	Th	H	T	O
			①	
	4	1	8	7
+	2	8	0	9
	6	9	9	6

2. (a)

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

(b)

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

(c)

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

3. (a)

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

(b)

	Th	H	T	O
	①	①	①	
	6	②	⑧	4
+	1	7	9	⑧
	⑧	0	8	2

(c)

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

4. (a)

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

(b)

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

(c)

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

(d)

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

5. (a)

	Th	H	T	O		
		3	6	5	→	370
+		4	3	2		430
						800

(b)

	Th	H	T	O		
	7	9	1	4	→	7910
+	2	1	1	9		2120
						10030

(c)

	Th	H	T	O		
	3	5	7	3	→	3570
+	2	4	2	9		2430
						6000

6. Word problem Solution—

	Th	H	T	O
	②	②	①	
Sale of the Ist day →	1	5	9	7
Sale of the IInnd day →	2	9	9	0
+	3	5	2	7
	8	1	1	4

7. (a)

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

(b)

	Th	H	T	O
	①	①	①	
	2	3	8	7
+	3	6	4	9
	6	0	3	6

8. Raxi travelled Total =

	Th	H	T	O
	②	②	①	
	2	7	9	8
	3	4	6	0
+	1	8	8	9
	8	1	4	7

9. Amit drive total

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

10.

		Th	H	T	O
			①		
Ticket sold on the first day →		2	0	9	4
Ticket sold on the second day →	+	2	7	5	1
Ticket sold on the third day →		2	0	5	0
Total Number of ticket Sold		6	8	9	5

Puzzle Time **[Page No. 27]**

1.

5	5	2
1	4	7
6	3	3

2. (T)

	①	②	
		5	6
	1	4	8
+		2	8
	2	3	2

(M)

	①	①	
	7	6	5
	4	4	6
+	3	6	8
	15	7	9

(L)

	①	①	
	5	2	3
	2	7	7
+	6	6	0
	14	6	0

(A)

	①	①	
		3	4
	9	8	5
+		1	3
	10	3	2

(B)

		①	
			4
		6	5
+	3	2	7
	3	9	6

(O)

	2	0	0
	8	0	0
+		8	7
	10	8	7

(E)

	①	①	
	7	7	7
	5	5	5
+	6	6	6
	19	9	8

(A)

$$\begin{array}{cccc} & ① & ① & \\ & 6 & 5 & 7 \\ & & 4 & 5 \\ + & 9 & 8 & 7 \\ \hline & 16 & 8 & 9 \end{array}$$

What do ships eat for breakfast?

B	396
O	1087
A	1689
T	232
M	1579
E	1998
A	1032
L	1460

Read Life Connection **[Page No. 28]**

1. Cost of 1 Pencil = ₹ 5

Cost of 4 Pencil = ₹ 5 + ₹ 5 + ₹ 5 + ₹ 5

= ₹ 20

Cost of 1 Notebook = ₹ 32.50

Cost of 2 Notebook = ₹ 32.50 + ₹ 32.50

= ₹ 65.00

Cost of 1 Pencil box = ₹ 90

Total Money he spend = ₹ 20 + ₹ 65 + ₹ 90

= ₹ 175

2.

		Th	H	T	O
		①	①	①	
Toy car sold in the morning →		2	4	5	6
Toy car sold in the afternoon →		3	7	8	9
Tay car sold in the evening →	+	1	3	2	1
Total toy car sold		7	5	6	6

3.

		Th	H	T	O
		①	①	①	
Light on first day		2	7	8	9
Light on second day		3	4	5	6
Lights added	+	1	2	3	4
Total light		7	4	7	9

4.

		Th	H	T	O
		①	①	①	
fantasy books		3	8	2	1
adventure books		4	2	3	6
magical books	+	1	5	6	7
total No. of books		9	6	2	4

5.

		Th	H	T	O
		①	②	②	
Number of roses		1	2	4	5
Number of sunflower		2	3	8	9
Students plant flower	+	3	4	7	8
Total Number of flower		7	1	1	2

Hands-On Activity **[Page No. 28]**

1.

$$\begin{array}{cccc} ① & ① & & \\ 3 & 8 & 9 & 1 \\ + \ 5 & 7 & 9 & 4 \\ \hline 9 & 6 & 8 & 5 \end{array}$$

$$\begin{array}{cccc} ① & ① & & \\ 1 & 8 & 5 & 5 \\ + \ 3 & 5 & 9 & 2 \\ \hline 5 & 4 & 4 & 7 \end{array}$$

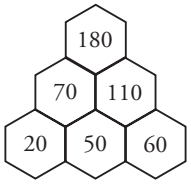
		①		
	4	6	4	0
+	2	1	8	6
	6	8	2	6

			①	
	2	0	1	9
+	4	3	2	1
	6	3	4	0

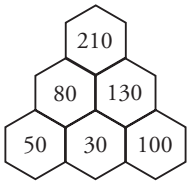
	①		①	
	3	2	0	9
+	3	8	8	8
	7	0	9	7

		①	①	
	1	0	9	9
+	4	4	7	7
	5	5	7	6

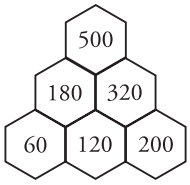
2. (a)



(b)



(c)



CHAPTER-4
Subtraction

Rapid Refresh - 1 **[Page No. 31]**

1.

	Th	H	T	O
	◯	◯	◯	◯
	8	9	7	6
–	2	8	1	3
	6	1	6	3

2.

	Th	H	T	O
	◯	◯	◯	◯
	3	8	3	8
–	1	7	1	1
	2	1	2	7

3.

	Th	H	T	O
	◯	◯	◯	◯
	6	9	4	5
–	3	6	2	2
	3	3	2	3

4.

	Th	H	T	O
	◯	◯	◯	◯
	8	8	3	5
–	4	5	2	1
	4	3	1	4

5.

	Th	H	T	O
	◯	⑦	⑰	◯
	4	8	7	6
–	1	3	8	2
	3	4	9	4

6.

	Th	H	T	O
	⑦	⑪	⑥	⑫
	8	1	⑦	2
–	5	9	6	3
	2	2	0	9

7.

	Th	H	T	O
	⑥	⑯	⑥	⑯
	7	6	7	6
–	5	8	5	8
	1	8	1	8

8.

	Th	H	T	O
	⑦	⑩	⑥	⑭
	8	0	7	4
–	4	5	0	8
	3	5	6	6

9.

	Th	H	T	O
	①	⑫	②	⑭
	2	2	3	4
–	1	5	1	8
	0	7	1	6

10.

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

11.

	Th	H	T	O
	⑥	⑨	⑨	⑩
	7	0	0	0
–	5	6	1	3
	1	3	8	7

12.

	Th	H	T	O
	⑦	⑨	⑩	◯
	8	0	0	5
–	4	7	3	2
	3	2	7	3

Rapid Refresh **[Page No. 33]**

1. Jessica had pencils

She bought more pencils

Total pencils

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

She gave pencils = 2357

Pencils Now she have

	Th	H	T	O
		③	⑬	⑯
	5	4	4	6
–	2	3	5	7
	3	0	8	9

Jessica has 3089 pencils now.

2. The school had books

They received books

Total books

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

The school sold books → 3,469

Books left →

	Th	H	T	O
	7	9	8	7
–	3	4	6	9
	4	5	1	8

∴ 4518 books are lift in the school.

3. A bakery made cookies

Sold cookies

Cookies left

	Th	H	T	O
	4	7	5	8
–	2	1	2	6
	2	6	3	2

No. of cookies baked → 1,237

Total cookies in bakery →

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

4. Toy store had toys

Received toys

Total toys

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

Toys sold → 3678

Toys lift in the store →

	Th	H	T	O
	7	7	5	7
–	3	6	7	8
	4	0	7	9

5. David had marbles

he gave marble to his friend

marble left with him

	Th	H	T	O
	7	1	2	4
–	3	0	8	9
	4	0	3	5

He found marbles → 2,134

Marbles he have now →

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

Rapid Refresh - 3 **[Page No. 35]**

1.

			Th	H	T	O
8,123	→		8	1	0	0
3,455	→	–	3	5	0	0
			4	6	0	0

2.

			Th	H	T	O
4,859	→		4	9	0	0
2,674	→	–	2	7	0	0
			2	2	0	0

3.

			Th	H	T	O
9,342	→		9	3	0	0
5,678	→	–	5	7	0	0
			3	6	0	0

4.

			Th	H	T	O
7845	→		8	0	0	0
3299	→	–	3	0	0	0
			5	0	0	0

Reffec your skill **[Page No. 35]**

1. (a)

	Th	H	T	O
	9	6	2	7
–	5	3	0	2
	4	3	2	5

(b)

	Th	H	T	O
	7	7	6	3
–		5	0	2
	7	2	6	1

(c)

	Th	H	T	O
	6	5	7	8
–		2	4	6
	6	3	3	2

2. (a)

	Th	H	T	O
	④	⑪	⑫	⑱
	5	2	3	8
–	4	2	3	9
	0	9	9	9

(b)

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

(c)

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

(d)

	Th	H	T	O
	◯	⑤	⑰	⑩
	4	6	8	0
–	3	4	9	9
	1	1	8	1

(e)

	Th	H	T	O
	◯	◯	③	⑮
	7	3	4	5
–	1	0	2	6
	6	3	1	9

(f)

	Th	H	T	O
	◯	①	⑪	◯
	4	2	1	7
–	3	1	8	3
	1	0	3	4

3. Total cost of bicycled moped → ₹ 9875

Cost of bicycle → – ₹ 1870

Cost of moped → ₹ 8005

4.
$$\begin{array}{r} 8506 \\ -\ 5849 \\ \hline 2657 \end{array}$$

Estimated difference → 2800

5.
$$\begin{array}{r} 4000 \\ -\ 2768 \\ \hline 1232 \end{array}$$

Estimated answer → 1000

6. (a)

	Th	H	T	O
		①	5	4
–			④	③
		1	1	1

(b)

	Th	H	T	O
	6	①	8	4
–		2	③	7
	⑤	9	4	⑦

7. Usha need Money → ₹ 7250

She has Money → – ₹ 3450

More money she need → ₹ 3800

8. No. of people in village → 8962

no. of men → – 6546

no. of women → 2416

9. Total students in a school → 2955

Absent students → –1022

Present students → 1933

10. No. of houses in a calory → 2460

no. of vacavt house → – 654

no. of occupied → 1806

Puzzle time **[Page No. 36]**

1.
$$\begin{array}{r} x + y = 2000 \\ x - y = 1000 \\ \hline 2x = 3000 \end{array}$$

$$x = \frac{3000}{2}$$

$= 1500$

$y = 2000 - 1500$

$= 500$

So the Number is 1500, 500

2. $x + 1000 - 1500 = 200$

$x - 500 = 200$

so the answer is $500 + 200 = 700$

3. (a)

In	Out
7	**13**
7	**13**
14	20
15	21
Rule : add 6	

(b)

In	Out
2	8
6	**12**
7	**13**
12	18
Rule : add 6	

(c)

In	Out
9	2
12	5
18	11
27	20
Rule : Subtract 7	

(d)

In	Out
18	**12**
11	5
42	**36**
15	9
Rule : Subtract 6	

In	Out
6	5
9	8
14	13
20	19
Rule : Subtract 1	

4. 1.

8	13	6	
7	9	11	27
12	5	10	

2.

10	3	8	
5	7	9	21
6	11	4	

Real life convections **[Page No. 37]**

	Estimated Values
1. Total children in school	$\rightarrow 2500 \rightarrow 2500$
children did not come	$\rightarrow 320 \rightarrow -300$
children present	$\rightarrow$ 2200
2. Total run scored	$\rightarrow 2458$
Sachin scored run	$\rightarrow 1458$
Dhoni scored run	$\rightarrow 549$
$\therefore$ Sehwag scored run	$= 2458 - 1458 - 549$
	$= 2485 - 2007$
	$= 451$

3. (a)

₹ 850

– ₹ 425

₹ 425

The cast of the shirt is ₹ 425 more than shoes.

(b) Cast of a book and a shirt

= ₹ 850 + ₹ 220

= ₹ 1070

Money given to the shopkeepers

= ₹ 2000

Money get back = ₹ 2000

– ₹ 1070

₹ 930

I will get ₹ 930 back.

(b) Cost of all three items = ₹ 850 + ₹ 425 + ₹ 220

= ₹ 1495

Rahul had money = ₹ 1000

Rahul has less money= ₹ 1495

– ₹ 1000

₹ 495

4. (a) Bottle collect in first week - 3,520

Bottle collect in second week - 6,845

In second week they collect more bottles =

6845

– 3520

3325

Hence they collect 3325 more bottles in second week.

(b) Plastic bottles are bad for our environment because they pollute are environment. Plastic bottles are non-bio degradable so they do not decay and do not mix with the soil that's why they are bad for our environment.

Hands-on Activity **[Page No. 37]**

1.

74	–	28	=	46	60	–	12	=	48
–				–	–				–
50	–	27	=	23	32	–	14	=	18
=				=	=				=
24	51	–	23	=	28				30

CHAPTER-5
Multiplication

Rapid Refresh - 1 **[Page No. 41]**

1. (a) Product = 12 **(b)** Product = 14
Factors = 4, 3 Factors = 2, 7
(c) Product = 9 **(d)** Product = 24
Factors = 1, 9 Factors = 6, 4

2. (a) 35 **(b)** 54
(c) 25 **(d)** 27
(e) 24 **(f)** 48

3. (a) 6 **(b)** 6
(c) 9 **(d)** 9
(e) 3 **(f)** 4

4. (a) 23 **(b)** 67
(c) 39 **(d)** 1
(e) 870 **(f)** 0
(g) 8 **(h)** 8
(i) 7 **(j)** 20

Rapid Refresh - 2 **[Page No. 44]**

1. (a)

H	T	O
	3	2
	×	2
	9	6

(b)

H	T	O
	2	3
	×	2
	4	6

(c)

H	T	O
	4	0
	×	4
1	6	0

(d)

H	T	O
⑥	③	
	9	5
	×	7
6	6	5

(e)

H	T	O
③	②	
	9	7
	×	4
3	8	8

(f)

H	T	O
④	②	
	8	4
	×	5
4	2	0

2. (a)

	Th	T	O
	③	④	④	◯
		4	5	6
		×		8
	3	6	4	8

(b)

	Th	T	O
	⑤	④	④	
		8	6	7
		×		6
	5	2	0	2

(c)

	Th	T	O
	③	◯	④	◯
		6	0	8
			×	5
	3	0	4	0

(d)

	Th	H	T	O
	⑤	⑧	⑦	◯
		5	9	8
		×		9
	5	3	8	2

(e)

	Th	H	T	O
	⑥	⑥	④	
		9	8	7
		×		7
	6	9	0	9

(f)

	Th	H	T	O
	③	③	③	
		7	7	9
		×		4
	3	1	1	6

Rapid Refresh - 3 **[Page No. 46]**

1. Cost of 1 bed cover = ₹ 565

Cost of 18 bed cover = ₹ 565

×18

4520

+ 5650

10170

Cost of 18 bed cover is ₹ 10170

2. Books in 1 carton = 64

Books in 68 carton = 68 × 64

68

× 64

272

4080

4352

68 Carton have 4352 books.

3. Sweets in 1 packet = 275

Sweets in 23 packet = 275 × 23

275

× 23

825

5500

6325

There are 6325 Sweets in 23 Packet.

4. Wheat bag in 1 truck = 69

Wheat bag in 32 truck = 96 × 32

96

× 32

192

2880

3072

32 truck entertains 3072 bags of wheat.

5. Price of 1 electric fan = ₹ 584

Price of 2 dozen i-e-24 fan = ₹ 584 × 24

584

× 24

2336

11680

14016

Price of 24 fan is ₹ 14016

Rapid your skills **[Page No. 46]**

1. (a) $8 \times 7 = \underline{7} \times 8$

(b) $6 \times 5 = 5 \times \underline{\mathbf{6}}$

(c) $\underline{\mathbf{3}} \times 4 = 4 \times 3$

(d) $2 \times \underline{\mathbf{4}} = 4 \times 2$

(e) $7 \times \underline{\mathbf{1}} = 7$

(f) $\underline{\mathbf{1}} \times 8 = 8$

(g) $9 \times 1 = \underline{\mathbf{9}}$

(h) $8 \times \underline{\mathbf{0}} = 0$

(i) $0 \times 6 = \underline{\mathbf{0}}$

(j) $3 \times (5 \times 7) = (3 \times 5) \times \underline{7}$

(k) $6 \times (30 + 9) = (6 \times \underline{\mathbf{30}}) + (6 \times \underline{\mathbf{9}})$

2. (a) $3 \times 3 = 9$ **(b).** $3 \times 4 = 12$

3. (a) 6890 **(b).** 8400

(c) 7000 **(d).** 2960

(e) 3660 **(f).** 7600

(g) 8100 **(h).** 8400

(i) 12000

4. (a) 5841 **(b).** 7744

(c) 5845 **(d).** 2464

(e) 8624 **(f).** 9081

5. (a) $35 \times 17 = \underline{\mathbf{595}}$

$$\begin{array}{r} 35 \\ \times\ 17 \\ \hline 245 \\ 350 \\ \hline 595 \end{array}$$

(b) $52 \times 48 = \underline{\mathbf{2496}}$

$$\begin{array}{r} 52 \\ \times\ 48 \\ \hline 416 \\ 2080 \\ \hline 2496 \end{array}$$

(c) $68 \times 42 = \underline{\mathbf{2456}}$

$$\begin{array}{r} 68 \\ \times\ 42 \\ \hline 136 \\ 2720 \\ \hline 2856 \end{array}$$

(d) $705 \times 13 = \underline{\mathbf{9165}}$

$$\begin{array}{r} 705 \\ \times\ 13 \\ \hline 2115 \\ 7050 \\ \hline 9165 \end{array}$$

(e) $628 \times 15 = \underline{\mathbf{9420}}$

$$\begin{array}{r} 628 \\ \times\ 15 \\ \hline 3140 \\ 6280 \\ \hline 9420 \end{array}$$

(f) $272 \times 36 = \underline{\mathbf{9792}}$

$$\begin{array}{r} 272 \\ \times\ 36 \\ \hline 1632 \\ 8160 \\ \hline 9792 \end{array}$$

6. I truck carry bags rice = 78

93 truck can carry = $78 \times 93 = \underline{\mathbf{7254}}$

$$\begin{array}{r} 78 \\ \times\ 93 \\ \hline 234 \\ 7020 \\ \hline 7254 \end{array}$$

93 truck can carry 7254 bags of rice.

7. Weight of 1 book = 1250 grams

Weight of 7 book = 1250×7

$$\begin{array}{r} 1250 \\ \times\ 7 \\ \hline 8750 \text{ gram} \end{array}$$

So the weight of 7 books is 8750 grams

8. Weight of 1 bag of rice = 35 kg

Weight of 256 bag of irce = 256×35

$$\begin{array}{r} 256 \\ \times\ 35 \\ \hline 1280 \\ 7680 \\ \hline 8960 \end{array}$$

Weight of 256 bags of rice is 8960 kg.

Puzzle time **[Page No. 47]**

1. Across → B. 21 × 13 = **273**
D. 17 × 39 = **663**
F. 37 × 24 = **888**
G. 329 × 20 = **6580**
Down ↓ A. 28 × 31 = **868**
B. 53 × 45 = **2385**
C. 236× 15 = **3540**
E. 49 × 14 = **686**

2. **(a)** 69 × 10 = 690
(b) **30** × **20** = 600
(c) **13** × **20** = 260
(d) **11** × **25** = 275
(e) **30** × **25** = 750
(f) **30** × **10** = 300
(g) **22** × **10** = 220
(h) **25** × **20** = 500

3. No of birds on tree A = 7
No. of birds on tree B = 5
If B give one bird to tree A then Birds on tree A will become 8 while birds on tree B will be left 4. Hence birds on tree A will get double of birds on tree B.
Similarly if tree A give birds to tree B. then birds left on tree A will be 6 while on tree B. birds will become 6. Which means that birds on the B will become equal to birds on tree A.

Real life Connection **[Page No. 48]**

1. Eggs in one trays = 35
Eggs is 50 trays = 35 × 50

$$\begin{array}{r} 35 \\ \times\ 50 \\ \hline 00 \\ 1750 \\ \hline 1750 \end{array}$$

Eggs is 50 tray are 1750

2. Weight of person on moon = 5 kg.
Since weight on earth is 6 times more than on moon
So weight on earth is = 5 × 6
= 30kg.

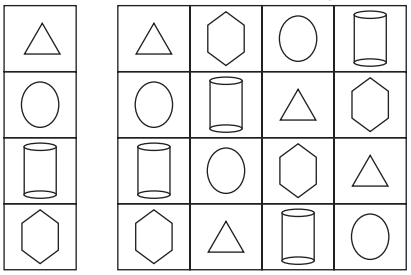
3. Books on story book = 175 pages
Books on 9 storybook = 175 × 9
= 1575 pages

4. Rohan's earlier salary = ₹ 3,280
as' salary is increased two times!
Hence Rohan's Present salary = ₹ 3,280

$$\begin{array}{r} \times\ 2 \\ \hline 6560 \end{array}$$

Hands on Activity **[Page No. 48]**

1.



Yes, we can find two different ways to do it.

CHAPTER-6
Division

Rapid Refresh - 1 **[Page No. 51]**

1. 16 ÷ 4 = **4**
16 – 4 = 12
12 – 4 = 8
8 – 4 = 4
4 – 4 = 0
Answer is 4 as we subtracted 4 four times to search 0.

2. 25 ÷ 5 = **5**
25 – 5 = 20
20 – 5 = 15
15 – 5 = 10
10 – 5 = 5
5 – 5 = 0
Answer is 5 as use subtracter 5 give times to reach 0.

3. 42 ÷ 6 = 7
42 – 6 = 36
36 – 6 = 30
30 – 6 = 24
24 – 6 = 18
18 – 6 = 12
12 – 6 = 6

6 – 6 0

Answer is 7 as we subtract 6 seven times to reach 0.

4. 56 ÷ 7 = **8**

56 – 7 = 49

49 – 7 = 42

42 – 7 = 35

35 – 7 = 28

28 – 7 = 21

21 – 7 = 14

14 – 7 = 7

7 – 7 = 0

Answer is 8 as we subtract 7 eight times to reach 0.

6. 72 ÷ 8 = **9**

72 – 8 = 64

64 – 8 = 56

56 – 8 = 48

48 – 8 = 40

40 – 8 = 32

32 – 8 = 24

28 – 8 = 16

16 – 8 = 8

8 – 8 = 0

Answer is 9 as we subtract 8 nine times to reach 0.

7. 36 ÷ 9 = **4**

36 – 9 = 27

27 – 9 = 18

18 – 9 = 9

9 – 9 = 0

Answer is 4 as we subtract 9 four times to reach 0.

2. (a) 1 **(b)** 0

(c) 905 **(d)** 152

(e) 0 **(f)** 5260

Rapid Refresh - 2 **[Page No. 54]**

1. (a) 36 ÷ 9 = 4 **(b)** 40 ÷ 8 = 5

36 ÷ 4 = 9 40 ÷ 5 = 8

(c) 28 ÷ 7 = 4 **(d)** 24 ÷ 8 = 3

28 ÷ 4 = 7 24 ÷ 8 = 3

(e) 63 ÷ 7 = 9 **(f)** 30 ÷ 6 = 5

63 ÷ 9 = 7 30 ÷ 5 = 6

2. (a) 8 × 7 = 56 **(b)** 5 × 5 = 25

7 × 8 = 56 5 × 5 = 25

(c) 9 × 8 = 72 **(d)** 9 × 5 = 45

8 × 9 = 27 5 × 9 = 45

(e) 6 × 8 = 48 **(f)** 11 × 4 = 44

8 × 6 = 48 4 × 11 = 44

3. (a) 32 ÷ 4 = **8**

```
   8
4)32(
 -32
  0
```

(b) 48 ÷ 2 = **24**

```
   24
2)48(
 -4↓
  08
 -8
  0
```

(c) 93 ÷ 3 = **31**

```
   31
3)93(
 -9↓
  03
 -3
  0
```

(d) 64 ÷ 4 = **16**

```
   16
4)64(
 -4↓
  24
 24
  0
```

4. (a) 68 ÷ 5 =

```
   13
5)68(
 -5↓
  18
 -15
  03
```

Checking answer.

∴ Dividend = Divisor× quotient + remainder

68 = 5 × 13 + 3

= 65 + 3

= 68

(b) $57 \div 4 =$

$$\begin{array}{r} 14 \\ 4\overline{)57} \\ -4\downarrow \\ \hline 17 \\ -16 \\ \hline 01 \end{array}$$

Checking answer.

$\therefore$ Dividend = Divisor× quotient + remainder

$57 = 4 \times 14 + 1$

$= 56 + 1$

$= 57$

(c) $89 \div 6 =$

$$\begin{array}{r} 14 \\ 6\overline{)89} \\ -6\downarrow \\ \hline 29 \\ 24 \\ \hline 05 \end{array}$$

Checking answer.

$\therefore$ Dividend = Divisor× quotient + remainder

$89 = 6 \times 14 + 5$

$= 84 + 5$

$= 89$

(d) $73 \div 4 =$

$$\begin{array}{r} 18 \\ 4\overline{)73} \\ -4\downarrow \\ \hline 33 \\ 32 \\ \hline 01 \end{array}$$

Checking answer.

$73 = 4 \times 18 + 1$

$= 72 + 1$

$= 73$

5. (a) $246 \div 2$

$$\begin{array}{r} 123 \\ 2\overline{)246} \\ -2\downarrow \\ \hline 04 \\ -4 \\ \hline 06 \\ -6 \\ \hline 01 \end{array}$$

quotient → 123

(b) $306 \div 3$

$$\begin{array}{r} 102 \\ 3\overline{)306} \\ -3\downarrow \\ \hline 00 \\ -0 \\ \hline 06 \\ -6 \\ \hline 0 \end{array}$$

quotient → 102

(c) $920 \div 8$

$$\begin{array}{r} 115 \\ 8\overline{)920} \\ -8\downarrow \\ \hline 12 \\ -8 \\ \hline 40 \\ 40 \\ \hline 0 \end{array}$$

quotient → 115

(b) $805 \div 7$

$$\begin{array}{r} 115 \\ 7\overline{)805} \\ -7\downarrow \\ \hline 10 \\ -7 \\ \hline 35 \\ 35 \\ \hline 0 \end{array}$$

Quotient = 115

6. (a) $487 \div 6$

$$\begin{array}{r} 81 \\ 6\overline{)487} \\ -48\downarrow \\ \hline 07 \\ -6 \\ \hline 1 \end{array}$$

Quotient = 81

Remainder = 1

(b) $479 \div 9$

$$\begin{array}{r} 53 \\ 9\overline{)479} \\ -45\downarrow \\ \hline 29 \\ -27 \\ \hline 2 \end{array}$$

Quotient = 53

Remainder = 2

(c) 615 ÷ 9

$$\begin{array}{r} 68 \\ 9\overline{)615} \\ -54\downarrow \\ \hline 75 \\ 72 \\ \hline 3 \end{array}$$

Quotient = 68

Remainder = 3

(d) 576 ÷ 5

$$\begin{array}{r} 115 \\ 5\overline{)576} \\ -5 \\ \hline 07 \\ -5\downarrow \\ \hline 26 \\ -25 \\ \hline 1 \end{array}$$

Quotient = 115

Remainder = 1

7. (a) 5601 ÷ 1

$$\begin{array}{r} 1867 \\ 3\overline{)5601} \\ -3 \\ \hline 26 \\ -24\downarrow \\ \hline 20 \\ -18 \\ \hline 21 \\ 21 \\ \hline 0 \end{array}$$

Quotient = 1867

(b) 2468 ÷ 2

$$\begin{array}{r} 1234 \\ 2\overline{)2468} \\ -2 \\ \hline 04 \\ -4\downarrow \\ \hline 06 \\ -06 \\ \hline 08 \\ -8 \\ \hline 0 \end{array}$$

Quotient = 1234

(c) 8064 ÷ 7

$$\begin{array}{r} 1152 \\ 7\overline{)8064} \\ -7 \\ \hline 10 \\ -7\downarrow \\ \hline 36 \\ -35\downarrow \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

Quotient = 1152

(d) 9872 ÷ 8

$$\begin{array}{r} 1234 \\ 8\overline{)9872} \\ -8 \\ \hline 18 \\ -16\downarrow \\ \hline 27 \\ -24\downarrow \\ \hline 32 \\ 32 \\ \hline 0 \end{array}$$

Quotient = 1234

8. (a) 7742 ÷ 5

$$\begin{array}{r} 1548 \\ 5\overline{)7742} \\ -5 \\ \hline 27 \\ -25\downarrow \\ \hline 24 \\ -20\downarrow \\ \hline 42 \\ 40 \\ \hline 2 \end{array}$$

Quotient = 1548

(b) 9541 ÷ 4

$$\begin{array}{r} 2385 \\ 4\overline{)9541} \\ -8 \\ \hline 15 \\ 12\downarrow \\ \hline 34 \\ -32\downarrow \\ \hline 21 \\ 20 \\ \hline 1 \end{array}$$

Quotient = 2385

Remainder = 1

(e)

$$\begin{array}{r} 8\overline{)8763(}1095 \\ -8 \\ \hline 76 \\ -72 \\ \hline 43 \\ -40 \\ \hline 03 \end{array}$$

Quotient = 1095

Remainder = 3

(d)

$$\begin{array}{r} 7\overline{)5603(}800 \\ -56 \\ \hline 0003 \end{array}$$

Quotient = 800

Remainder = 3

Rapid Refresh - 3 **[Page No. 56]**

1. (a) Joy has 145 books in his study room. He wants to arrange them in 5 shelves. How many books should be there in each shelf so that each shelf contain equal books?

(b) There are 1260 bulb in a factory. These bulbs are to be equally paced in 4 cartons. How many bulbs should be paced in each carton, to pack all the bulb equally?

1. (c) A school has 518 chocolates. These chocolates should be divided in 7 section in the way that each section get equal number of chocolates. And each student get one chocolate. How many children are there in each section?

2. (a) 80 ÷ 10

$$\begin{array}{r} 8 \\ 10\overline{)80(} \\ -80 \\ \hline 0 \end{array}$$

Quotient → 8

Remainder → 0

(b) 652 ÷ 10

$$\begin{array}{r} 65 \\ 10\overline{)652(} \\ -60\downarrow \\ \hline 52 \\ -50 \\ \hline 2 \end{array}$$

Quotient → 65

Remainder → 2

(c) 371 ÷ 10

$$\begin{array}{r} 37 \\ 10\overline{)371(} \\ -30\downarrow \\ \hline 71 \\ -70 \\ \hline 1 \end{array}$$

Quotient → 37

Remainder → 1

(d) 4516 ÷ 10

$$\begin{array}{r} 451 \\ 10\overline{)4516(} \\ 40\downarrow \\ \times 51 \\ 50 \\ \times 16 \\ 10 \\ \times 6 \end{array}$$

Quotient → 451

Remainder → 6

(e) 3560 ÷ 10

$$\begin{array}{r} 356 \\ 10\overline{)3560(} \\ -30\downarrow \\ \hline 56 \\ -50 \\ \hline 60 \\ -60 \\ \hline 0 \end{array}$$

Quotient → 356

Remainder → 0

(f) 10000 ÷ 10

$$10\overline{)10000}\,(1000$$
$$-10\downarrow$$
$$00$$
$$-00\downarrow$$
$$00$$
$$-00$$
$$00$$
$$-00$$
$$0$$

Quotient → 1000

Remainder → 0

3. Sushil spend = ₹ 96

Total no of pencil = 8

he paid for each pencil =

$$8\overline{)96}\,(12$$
$$-8$$
$$16$$
$$16$$
$$0$$

he paid ₹ 12 for each pencil.

4. Total seats in the bus = 52 seats

Seats in each row = 4 seats

Total no. of row =

$$4\overline{)52}\,(13$$
$$-4$$
$$12$$
$$12$$
$$0$$

There are 13 row in the bus.

5. Total apples → 539

Total boxes → 9

Apples in each box =

$$9\overline{)539}\,(59$$
$$-45$$
$$89$$
$$81$$
$$8$$

∴ Apple in each box are 59 and 8 apples are left.

6. Total chairs → 227 chairs

Total rows → 7 rows

no. of chair in each row →

$$7\overline{)227}\,(32$$
$$-21$$
$$17$$
$$14$$
$$3$$

So there are 32 chairs in each row and 3 chair are left.

7. Total number of people → 2865

Total bogies in the train → 5

no of people in each bogie →

$$5\overline{)2865}\,(573$$
$$-25\downarrow$$
$$36$$
$$-35\downarrow$$
$$15$$
$$-15$$
$$0$$

Hence there are 573 people in each bogie.

8. Total bulbs → 5288

No of cartons → 7

No of bulb packed in each carton

$$\rightarrow 7\overline{)5288}\,(755$$
$$-49\downarrow$$
$$38$$
$$-35\downarrow$$
$$38$$
$$-35$$
$$3$$

Hence 755 bulb are packed in each carton and 3 bulb are left.

Reflect your skills [Page No. 56]

1. (a) Steps in 10 jump → 80 steps

Steps in 1 jump → 80 ÷ 10

$$= 10\overline{)80}\,(8$$
$$-80$$
$$0$$

Steps in 1 Jumps = 8 steps

An we know that squirrel Jump 8 steps at a time. That means squirrel reach 80 steps in 10 jumps.

(b) In 1 jumps rabbit reach = 5 steps

5 steps reached by rabbit in = 1 jumps

1 steps reached by rabbits in = $\frac{1}{5}$

35 steps reached by rabbit in = $\frac{1}{5} \times 35$

= 7 jump.

(c) Frog reach in 1 jump = 2 steps

frog reach in 3 jump = 2 × 3 steps

= 6 steps

(d) A kangaroo reach 30 steps in 1 jump.

(e) A horse reach 15 steps in = 1 jump

horse reach 1 step in = $\frac{1}{15}$ jump

house reach 45 steps in = $\frac{1}{15} \times 45$ jump

= 3 jump.

2. c is correct answer.

3. twelve divided by three $12 \div 3 = \frac{12}{3}$

Ninety divided by ten $90 \div 10 = \frac{90}{10}$

Sixty four divided by eight $64 \div 8 = \frac{64}{8}$

4. $\frac{3}{18}$ is incorrect because in this statement 18 is taken as divisor while in other statement 18 in placed as dividend.

5. **(a)** $4 \times 2 \div 1 = 8$

(b) $3 \times 4 \div 2 = 6$

(c) $7 \times 4 \div 2 = 14$

(d) $\mathbf{3 \times 4 \div 6 = 2}$

(e) $10 \div 5 \times 3 = 6$

(f) $8 \div 2 \times 3 = 12$

(g) $12 \div 3 \times 4 = 16$

(h) $15 \div 3 \times 2 = 10$

6.

(a)	Dividend	(i)	Count by the divisor until you get the dividend and count up your rows. [c]
(b)	Quotient	(ii)	Count backward by the value of the divisor [d]
(c)	Draw an array	(iii)	Subtract the divisor until you reach zero (0). [e]
(d)	Skip count	(iv)	The number of groups that the divident is being separated into. [*f*]
(e)	Repeated subtraction	(v)	The large number that is being divided into smaller groups. [a]
(f)	divisor	(vi)	The answer to a division problem. [b]

7. **(a)** $363 \div 3$

$$
\begin{array}{r}
121 \\
3\overline{)363} \\
-3\downarrow \\
\hline
06 \\
-6\downarrow \\
\hline
03 \\
-3 \\
\hline
0
\end{array}
$$

quotient → 121

(b) $408 \div 4$

$$
\begin{array}{r}
102 \\
4\overline{)408} \\
-4\downarrow \\
\hline
00 \\
-0\downarrow \\
\hline
08 \\
8 \\
\hline
0
\end{array}
$$

quotient → 102

(c) $2604 \div 102$

```
     1302
  2)2604(
   -2
    06
    -6
     00
     -0
      04
      -4
       0
```

quotient → 1302

8. Cost of 9 shirts = ₹ 864

Cost of 1 shirt = ₹ 864 ÷ 9 = 96

```
     96
  9)864(
   -81
    54
   -54
     0
```

Hence. cost of 1 shirt is ₹ 96

9. Total no. of exercise books → 408

Number of boys → 10

Each boy will get books =

```
      40
  10)408(
    -40
     08
     -0
      8
```

∴ Each boy will get 40 books and 8 books remain left.

10. Shopkeeper gave money to the publisher = ₹ 4820

Each book costs → ₹ 9

No of books shopkeeper boy = ₹ 4820 ÷ 9

```
     535
  9)4820(
   -45
    32
   -27
     50
    -45
      5
```

Hence shopkeeper boy 535 and he get back ₹ 5.

Puzzle time **[Page No. 58]**

1.

35	+	△5 =	(40)
+			÷
15 =			8 =
50	÷	10 =	5

Value of △ = 5

○ = 40

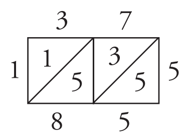
▭ = 15

□ = 50

2.

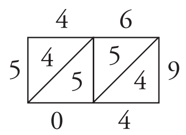
₹ 50		2	
₹ 20			2
₹ 10	1	1	3
₹ 5	1	1	
₹ 2		2	
₹ 1	1		1
50P	1	2	2
Total	₹ 16.50	₹ 120	₹ 72

3. 37 × 5



Hence the answer is 185

56 × 9



Hence the answer is 504

Real life connection **[Page No. 59]**

1. No. of pages 1 story book = 275

No. of pages in 8 story books = 275 × 8

= 2200

$$\begin{array}{r} 275 \\ \times\ 8 \\ \hline 2200 \end{array}$$

2. No of trays in carton = 65
No of eggs each trays = 35
So total no of eggs = 65 × 35

$$\begin{array}{r} 65 \\ \times\ 35 \\ \hline 325 \\ 195\times \\ \hline 2275 \end{array}$$

Hence total no of eggs are 2275.

Eggs are healthy and versatile food that are rich in vitamin, protein and minerals. However some people avoid eggs due to egg allergy and vegan diet. They can replace egg with soyabean, tofu, beans, yogurt etc.

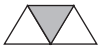
3. In the offer (a)
Cost of 5 exerciser book = ₹ 75
Cost of 1 exerciser boos = ₹ 75 ÷ 5
= ₹ 15
In the offer (b)
Cost of 6 exerciser book = ₹ 82
Cost of 1 exerciser book = ₹ 82 ÷ 6
= ₹ 13.66
Hence offer (b) is better.

4. Total number blankets = 384
Each family get blanket = 4
Number of families get blanket
= 384 ÷ 4
= 96
Hence 96 families get blanket.
We feel good while helping other.

CHAPTER-7
Fractions

Rapid Refresh - 1 **[Page No. 62]**

1.

(a) $\frac{1}{3}$		(i) One - third

(b) $\frac{1}{2}$		(ii) One - half
(c) $\frac{2}{3}$		(iii) Two - thirds
(d) $\frac{1}{4}$		(iv) One - fourth
(e) $\frac{3}{4}$		(v) Three - fourths

2. **(a)** $\frac{2}{5}$ **(b)** $\frac{3}{7}$

3. **(b) and (d) are divided into equal parts.**

4. **(a)** $\frac{7}{10}$

(b) $\frac{4}{9}$

(c) $\frac{1}{4}$

5. **(a)** $\frac{2}{4}$

(b) $\frac{1}{4}$

(b) $\frac{3}{4}$

Rapid Refresh - 2 **[Page No. 63]**

1. Total toffees = 12
Yellow toffee = 5
Green toffee = 2
Orange toffee = 1
Brown toffee = 4
Fraction of Brown colour
Toffee = $\frac{4}{12}$ answer

2. Total pieces of apple = 8
Pieces chetna eat = 5
Pieces eat fridge = 3
fraction chetna eat = $\frac{5}{8}$

3. Total no. of chocolate bar Ashima had

= 6

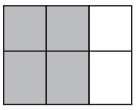
She give one of Asif and one to sahil

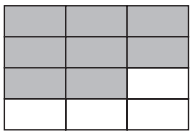
fraction she give away $\rightarrow \frac{2}{6}$.

4. Total gloves = 7
blue gloves = 2
green gloves = 3
black gloves = 1
brown gloves = 1
Fraction of black glove $\rightarrow \frac{1}{7}$

Reflect your skills **[Page No. 64]**

1. (a) $\frac{2}{3}$ 

(b) $\frac{4}{6}$ 

(c) $\frac{8}{12}$ 

2. (a) $\frac{3}{4}$ = Three - fourths

(b) $\frac{1}{3}$ = One - thirds

(c) $\frac{2}{5}$ = Two - fifths

(d) $\frac{1}{4}$ = One - fourths

(e) $\frac{1}{7}$ = One - sevenths

(f) $\frac{2}{3}$ = Two - Thirds

(g) $\frac{2}{9}$ = Two - Ninths

(h) $\frac{7}{8}$ = Seven - Eighths

3. (a) $\frac{4}{5}$ **(b)** $\frac{3}{7}$

(c) $\frac{1}{3}$ **(d)** $\frac{5}{8}$

(e) $\frac{7}{9}$ **(f)** $\frac{2}{5}$

(g) $\frac{1}{2}$ **(h)** $\frac{5}{6}$

(i) $\frac{3}{2}$

4. (a) $\frac{5}{8}$ **(b)** $\frac{4}{9}$

(c) $\frac{2}{3}$ **(d)** $\frac{1}{3}$

(e) $\frac{6}{8}$ **(f)** $\frac{5}{9}$

5. (a) $\frac{2}{10}$ **(b)** $\frac{4}{10}$

(c) $\frac{1}{10}$ **(d)** $\frac{5}{10}$

(e) An apple.

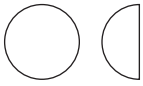
6. Total Pencil = 8
Pencil without = 3
fraction of pencils without erasers
$= \frac{3}{8}$

7. Total toys = 5
Sophie donate toys = 3
fraction of donated toys $= \frac{3}{5}$

8. Total Sums = 30
Suman finished sums = 10
fraction of homework she finished
$= \frac{10}{30} = \frac{1}{3}$

Puzzle Time **[Page No. 65]**

1. $\frac{1}{6}$

2. 

Real life Connection **[Page No. 66]**

1. Sophia had money = ₹ 100

She Spent money = $\frac{1}{2}$ of ₹ 100

= $\frac{1}{2}$ × 100 = ₹ 50

Money left with her = ₹ 100 – ₹ 50

= ₹ 50

2. Distance between school and home

= 6 miles

his father drop him = 1 mile away

distance left to cover by school = 6 – 1 = 5 mile

fraction of the distance covered by school bus = $\frac{5}{6}$

3. Total people = 18

No of females = $\frac{1}{3}$ of 18 = 6

∴ No of females are 6

4. No of sates = 28

No of union territories = 8

fraction of state and U.T having same Capital = $\frac{2}{36}$

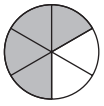
[as Punjab and haryana has the same capital].

Hands - on activity **[Page No. 66]**

1. (a) $\frac{4}{9}$ **(b)** $\frac{2}{9}$

(c) $\frac{3}{9}$ **(d)** $\frac{5}{9}$

(e) $\frac{7}{9}$ **(f)** $\frac{6}{9}$

2.  $\frac{4}{6}$

Exercises (Check Yourself) **[Page No. 69]**

1. (a) Two **(b)** Fixed

(c) No **(d)** $\overleftrightarrow{AB}$

(e) One **(f)** $\overrightarrow{AB}$

2. Rays $\overrightarrow{OB}$, $\overrightarrow{OC}$, $\overrightarrow{OF}$, $\overrightarrow{OH}$

Line segment → $\overline{OA}$, $\overline{OD}$, $\overline{OE}$, $\overline{OG}$

Line → $\overleftrightarrow{OH}$

3. (a) P_{II} **(b)** $P_{\perp}$, I

(c) I **(d)** $P_{\perp}$

(e) I **(f)** $P_{\perp}$

(g) I **(b)** P_{II}

(b) $P_{\perp}$, I

4. Do yourself

5. Do yourself

6. There are 5 triangles in our set. No, they are not equal in size.

Rapid Refresh - 2 **[Page No. 72]**

1. (a) Ice cream cone, Traffic cone

(b) Match box, books

(c) Round candle. Pipe

(d) Basket Ball, world Glabe

2. (a) Rectangular **(b)** Rectangular

(c) Rectangular **(d)** Rectangular

(e) Circle **(f)** Triangular

3. (a) 3, 3 **(b)** 4, 4

(c) Equal **(d)** opposite

(e) No, no

Reflect your skills **[Page No. 73]**

1. (a) two **(b)** no

(c) fixed **(d)** $\overleftrightarrow{AB}$

(e) Point **(f)** Position

2. (a) 6 **(b)** 5

3. (a) Cone **(b)** Sphere

(c) Cylinder **(b)** Cylinder

4. (a) Triangle, because it is 2 -D shape.

(b) Sphere

(c) Cube

(d) Circle

(e) A cylinder

5. A ——— 7 cm ——— B

6. A tangram has seven pieces: 5 Triangles, 1 square, 1 Parallelogram.

7. We will get a cuboid of length 8 cm, breadth 4cm and height 4 cm.

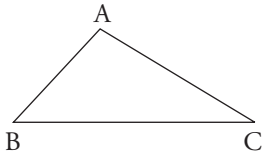
8. **(a)** Square

(b) circle

(c) Six

Puzzle time **[Page No. 74]**

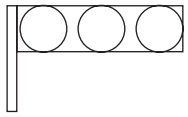
1. Triangle as triangle have no curved sides, 3 Straight sides, 3 vertices



2. 17

Real life connection **[Page No. 74]**

1.



We should follow traffic rules to keep yourself and other safe and to avoid accidents.

Hands - on Activity **[Page No. 75]**

1. **(a)** Cube **(b)** Tiling

(c) Tangram **(d)** line

CHAPTER-9
Measurement

Rapid Refresh-1 **[Page No. 78]**

1. Do yourself

2. **(a)** 197 m 5 cm

197 m + 5 cm

19700 cm + 5 cm

[$\because$ 1 m = 100 cm]

= 19705 cm

(b) 12 m 80 cm

= 12 m + 80 cm

= 1200 cm + 80 cm

= 1280 cm

[$\because$ 1 m = 100 cm]

(c) 4 m 75 cm

4 m + 75 cm

= 400 cm + 75 cm [$\because$ 1 m = 100 cm]

= 475 cm

3. **(a)** 285 cm

$\because$ 1 cm = $\frac{1}{100}$ m

$\therefore$ 285 = $\frac{285}{100}$ m

= 2m 85 cm

(b) 900 cm

$\because$ 1 cm = $\frac{1}{100}$ m

$\therefore$ 900 cm = $\frac{\breve{}}{\breve{}}$ m

= 9 m

(c) 179 cm

$\because$ 1 cm = $\frac{1}{100}$ m

$\therefore$ 179 cm = $\frac{\breve{}}{\breve{}}$ m

= 1 m 79 cm

4. **(a)** 2 km 69 m

$\because$ 1 km = 1000 m

$\therefore$ 2 km = 2 × 1000 = 2000 m

2 km 69 m = 2 km + 69 m

= 2000 m + 69 m

= 2069 m

(b) 900 cm

1 cm = $\frac{1}{100}$ m

900 cm = $\frac{900}{100}$ m

= 9 m

(c) 18 km 210 m

1 km = 1000 m

18 km = 18 × 1000 m

= 18000 m

18 km 210 m

= 18 km + 210 m

= 18000 m + 210 m

= 18210 m

5. **(a)** 5111 m

$$1\text{m} = \frac{1}{1000}\text{km}$$

$$5111\text{ m} = \frac{5111}{1000}\text{km}$$

$$= 5\text{ km }111\text{ m}$$

(b) 9210 m

$$1\text{m} = \frac{1}{1000}\text{km}$$

$$9210\text{ m} = \frac{9210}{1000}\text{km}$$

$$= 9\text{ km }210\text{ m}$$

(c) 8372 m

$$1\text{m} = \frac{1}{1000}\text{km}$$

$$8372\text{ m} = \frac{8372}{1000}\text{km}$$

$$= 8\text{ km }372\text{ m}$$

6. (a)

	km	m
		①
	63	380
+	14	175
	77	555

(b)

	c m
	①
	1 8
+	34
	52

7. (a)

	m	cm
	54	75
–	28	34
	26	41

(b)

	m	cm
	87	89
–	63	60
	24	29

8. (a)

	m	cm
	60	45
+	24	75
	85	20

(b)

	m	cm
	53	45
+	34	68
	88	13

(c)

	m	cm
	41	29
–	26	75
	14	54

(d)

	m	cm
	70	23
–	31	45
	38	78

Rapid Refresh 2 **[Page No. 80]**

1. (a) 15 kg

$$1\text{ kg} = 1000\text{ g}$$

$$15\text{ kg} = 15 \times 1000\text{ g}$$

$$= 15000\text{ g}$$

(b) 10 kg 76 g

$$1\text{ kg} = 1000\text{ g}$$

$$10\text{ kg} = 10000\text{ g}$$

$$10\text{ kg }76\text{ g}$$

$$= 10\text{ kg} + 76\text{ g}$$

$$= 10000\text{ g} + 76\text{ g}$$

$$= 10076\text{ g}$$

(c) 5 kg 543 g

$$1\text{ kg} = 1000\text{ g}$$

$$5\text{kg} = 5000\text{ g}$$

$$5\text{ kg }543\text{ g}$$

$$= 5\text{ kg} + 543\text{ g}$$

$$= 5000\text{ g} + 543\text{ g}$$

$$= 5543\text{ g}$$

2. (a) 6901 g

$$1\text{ g} = \frac{1}{1000}\text{kg}$$

$$6901\text{ g} = \frac{6901}{1000}\text{kg}$$

$$= 6\text{ kg }901\text{ g}$$

(b) 7923 g

$$1\text{g} = \frac{1}{1000}\text{kg}$$

$$7923 \text{ g} = \frac{7923}{1000}\text{kg}$$

$$= 7 \text{ kg } 923 \text{ g}$$

(c) 4512 g

$$1\text{g} = \frac{1}{1000}\text{kg}$$

$$4512 = \frac{4512}{1000}\text{kg}$$

$$= 4 \text{ kg } 512 \text{ g}$$

3. (a) 13650 g = 13 kg 650 g

(b) 5468 g = 5 kg 468 g

(c) 74685 g = 74 kg 685 g

4. (a)

	kg	g
	6	380
+	4	175
	10	555

(b)

	kg	g
	1	345
+	5	640
	6	985

5. (a)

	kg	g
	8	750
–	5	450
	3	300

(b)

	kg	g
	8	289
–	3	560
	4	729

6. (a)

	kg	g
	22	236
+	16	123
	38	359

(b)

	kg	g
	16	564
+	11	270
	27	834

(c)

	kg	g
	87	900
–	21	950
	65	950

(d)

	kg	g
	96	147
–	42	140
	54	007

Rapid Refresh-3 : **[Page No. 82]**

1. (a) 7 *l* 800 ml

$$1\ l = 1000 \text{ ml}$$

$$7\ l = 7 \times 1000 \text{ ml}$$

$$= 7000 \text{ ml}$$

$$7\ l\ 800 \text{ ml} = 7l + 8 \text{ ml}$$

$$= 7000 \text{ ml} + 800 \text{ ml}$$

$$= 7800 \text{ ml}$$

(b) 9 L 765 ml

$$1l = 1000 \text{ ml}$$

$$9l = 9 \times 1000 \text{ ml}$$

$$= 9000 \text{ ml}$$

$$9l\ 756 \text{ ml} = 9\text{l} + 765 \text{ ml}$$

$$= 9000 \text{ ml} + 765 \text{ ml}$$

$$= 9765 \text{ ml}$$

(c) 5l 6ml

$$1l = 1000 \text{ ml}$$

$$5l = 5 \times 1000 \text{ ml}$$

$$= 5000 \text{ ml}$$

$$5l\ 6 \text{ ml} = 5l + 6 \text{ ml}$$

$$= 5000 \text{ ml} + 6 \text{ ml}$$

$$= 5006 \text{ ml}$$

2. (a) 6594 ml

$$1\text{ml} = \frac{1}{1000}l$$

$$6594 \text{ ml} = \frac{6594}{1000}l$$

$$= 6l\ 594 \text{ ml}$$

(b) 4378 ml

$$1\text{ml} = \frac{1}{1000}l$$

$$4378 \text{ ml} = \frac{4378}{1000} l$$

$$= 4l\ 378 \text{ ml}$$

(c) 9876 ml

$$1\text{ml} = \frac{1}{1000} l$$

$$9876 \text{ ml} = \frac{9876}{1000} l$$

$$= 9l\ 876 \text{ ml}$$

3. (a) 1 L> 250 ml + 250 ml

(b) 75 ml< 500 ml

(c) $1l$ < 9999 ml

(d) $3l$ 220 ml= 3220 ml

4. (a) $1l$ + 345 ml

= 1000 ml + 345 ml

= 1345 ml

(b)

	l	ml
	63	380
+	14	175
	77	555

5. (a)

	l	ml
	28	750
–	8	450
	20	300

(b)

	l	ml
	87	289
–	63	560
	23	729

6. (a)

	l	ml
	25	830
+	42	126
	67	956

(b)

	l	ml
	13	645
+	54	143
	67	788

(c)

	l	ml
	29	910
–	21	500
	8	410

(d)

	l	ml
	63	560
–	34	230
	29	330

Reflect Your Skills **[Page No. 82]**

1. (a) 300 ml

(b) 15 cm

(c) 100 m

(d) 1 kg

(e) 750 g

(f) 40 l

2. If value of  = 960 ml

$$\text{Value of } \text{▽} = \frac{960}{3} \text{ml}$$

= 320 ml

3. Metre scale

4. Numbers of 500 g that make 2 kg [2,000 g] are,

$$\frac{2000\,\text{g}}{500\,\text{g}} = 4$$

Hence four 500 g make 2 kg.

5. x glass of 250 ml = $1l$ = 1000 ml

$$x \times 250 \text{ ml} = 1000 \text{ ml}$$

$$x = \frac{1000 \text{ ml}}{250 \text{ ml}} = 4$$

$$x = 4$$

Hence 4 glasses of 250 ml can be filled.

6. $5 \times 1l = x$

$5l = x$

Hence the capacity of bucket is $5l$.

7. Weight of 1 Suitcase → 3 kg 275 g

Weight of 4 Suitcase →

	kg	g
	3	275
×		4
	13	100

Hence the weight of 4 Suitcase is 13 kg 100 g.

8. Total smoothie = $2l$ 425 ml

Anuj had smoothie from it = 325 ml

Smoothie left =

	l	ml
	2	425
–	0	325
	2	100

Hence 2*l* 100 ml smoothie is left.

9. Blue ribbon = 2 m 95 cm
Red ribbon = 9 m 75 cm
Pink ribbon = 5 m 68 cm

Total length of ribbon =	m	cm
	2	95
	9	75
+	5	68
	18	38

Hence the total length of ribbon is 18 m 38 cm.

Puzzle Time **[Page No. 83]**

1. I am volume

2. a TIFF

Real life connection : **[Page No. 83]**

1. Height of the Pole = 100 m

Actual distance covered by the monkey in 1 minute.

= 30 m – 20 m
= 10 m

10 m distance covered by the monkey is = 1 min

1m distance covered by the monkey in $= \frac{1}{10}$ min.

100 m distance covered by the monkey in

$= \frac{1}{10} \bullet 100$ min.

= 10 minutes

2. Babita bought milk = 13*l* 850 ml

	l	ml
Milk consumed =	6	225
for making tea, cheese	4	80
and by her Child	+	899
	11	104

Milk used for curd =	*l*	ml
	13	850
–	11	104
	2	746

Hence 2*l* 746 ml milk is used for preparing curd.

3. Distance between Parul's office and house = 4km 500 m

Distance between Shruti's office and house = 4 km 800 m

Distance between Parul and Shruti's house =

	km	m
	4	800
–	4	500
	0	300

Hence the distance between Parul and Shruti's house is 300 m.

4. 1230 m = 1000 m + 230 m
= 1 km + 230 m [1000 m = 1 km]
= 1 km 230 m

CHAPTER-10
Time

Rapid Refresh **[Page No. 86]**

1. (a) (i) 4:15
(ii) Quarter Past 4

(b) (i) 1:15
(ii) Quarter Past 1

(c) (i) 11:15
(ii) Quarter Past 11

(d) (i) 4:30
(ii) Half Past 4

(e) (i) 8:30
(ii) Half Past 8

(f) (i) 5:30
(ii) Half Past 5

(g) (i) 1:45
(ii) Quarter Past 2

(h) (i) 7:45
(ii) Quarter Past 8

(i) (i) 4:45
(ii) Quarter Past 5

(j) (i) 2:55
(ii) 5 minutes to 3

(k) (i) 7:20
(ii) 20 minutes Past 7

(l) (i) 8:35
(ii) 35 minutes Past 8

2. Do your self

Rapid Refresh - 2 **[Page No. 89]**

1. **(a)** 12 **(a)** 30
(c) Tuesday **(a)** Thursday
2. **(a)** Saturday **(a)** Wednesday
(c) five **(a)** 17 June

Reflect your skill **[Page No. 89]**

1. **(a)** 12:15 **(b)** 2:15
(c) 2:45 **(d)** 7:15
(e) 5:45 **(f)** 11:45
2. **(a)** 24 hours
(b) 168 hours
(c) 7 a.m.
(d) 8:15 or Quarter Past 8.
3. **(a)** False **(b)** True
(c) True **(d)** True
4. **(a)** 15 **(b)** 12 O'clock
(c) Three (3) **(a)** Nine (9)

Reflect your skill **[Page No. 89]**

1. Do your self
2. Two times
3. 12 :29

Real life connection **[Page No. ?]**

1. 15 times
2. Time we should spend on phone
→ 1 hours
But we spend Time = 4 hours
Time we are over the limit
= 4 hours – 1 hours
= 3 hours
3. Without using mobile vision remain strong for = 55 years
With mobile usage, vision remain strong for = 35 years
Strong vision lost for year
= 55 years – 35 years
= 20 years.

Hands - on - Activity **[Page No. 91]**

1. minutes
2. seconds
3. Years
4. hours
5. days
6. Minutes
7. Days
8. hours
9. months
10. minuts.

CHAPTER-12
Symmetry and Patterns

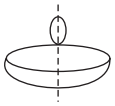
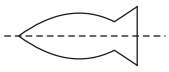
Rapid Refresh-1 **[Page No. 102]**

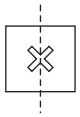
1. (a) No (b) No
(c) Yes (d) No
(e) No (f) Yes

2. (a)  (b) 

(c)  (d) 

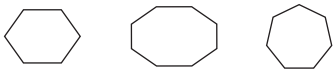
(e) 

3. (a)  (b) 

(c)  (d) 

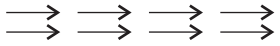
(e)

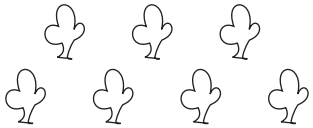
Rapid Refresh-2 **[Page No. 104]**

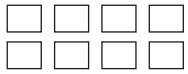
1. 15 18 21
2. 20 22 24
3. 74 83 92
4. 320 310 300
5. 
6. 
7. 

8. 12 33 12

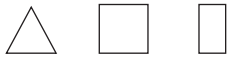
Reflect your Skills : **[Page No. 104]**

1. (a) 

(b) 

(c) 

(d) 

2. (a) 

(b) 

3. (a) 41 47 53

(b) 50 55 60

4. (a) k m o

(b) EeF FfG GgH

5. VYB

Puzzle Time : **[Page No. 105]**

1. K

2.

16	20	**24**	28	32
14	18	22	26	**30**
12	16	**20**	24	28
10	**14**	18	22	**26**
8	12	**16**	20	24

23	**26**	29	32	35
33	36	39	**42**	45
43	46	49	52	55
53	56	59	**62**	65
63	**66**	69	72	**75**

Real life connection : **[Page No. 106]**

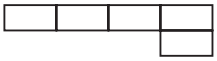
1. 42, 39, 36, 33, 30, 27

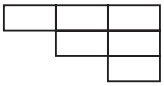
2. WHERE ARE YOU IN THE CANTEEN
I LOVE YOU
THIS BOOK IS FUN

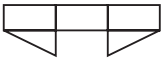
HAND ON ACTIVITY : **[Page No. 106]**

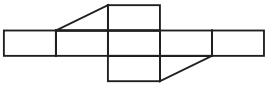
1. (a) 1 (b) 6
(c) 2, 4

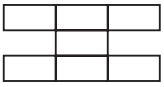
CHAPTER-13
Area and Perimeter

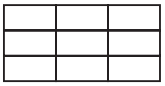
1. (a) (ii) 

(b) (i) 

(c) (vi) 

(d) (v) 

(e) (iv) 

(f) (iii) 

2. (a) 12 square units
(b) 8 square units
(c) 6 square units
(d) 9 square units

3. (a) Area of rectangle = Length × breadth
= 4cm × 3 cm
= 12 cm^2

(b) Area of rectangle = Length × breath
= 11 cm × 4cm
= 44 cm^2

(c) Area of rectangle = Length × breadth
= 12 cm × 5cm
= 60 cm^2

4. Area of Manav's field = $l \times b$
= 25 m × 16 m
= 400 m^2

Area of Mansi's field = $l \times b$
= 40 m × 40 m
= 1600 m^2

5. Do yourself

6. length of rectangle = 24 cm
= 10 m

Area of rectangle = length × breadth
= 24 m × 10 m
= 240 m^2

7. Area of rectangle = 18 square unit

One side of rectangle = 3 unit

$$\text{Other side} = \frac{\text{Area of rectangle}}{\text{One side of rectangle}}$$

$$= \frac{18\text{sq. unit}}{3\text{ unit}}$$

$$= 6 \text{ unit}$$

Rapid Refresh-2 **[Page No. 110]**

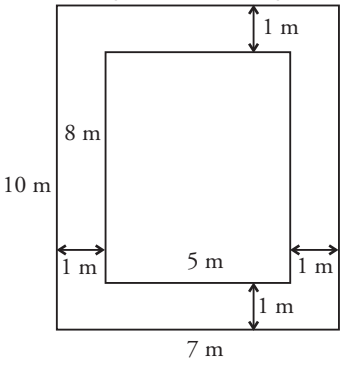
1. (a) Perimeter = 2 cm + 3 cm + 2 cm + 5 cm + 4 cm
= 16 cm

(b) Perimeter = 6 cm + 2 cm + 5 cm + 4 cm
= 17 cm

2. Length of rectangular Playground = 200 m
Width of Playground = 90 m
Fencing required to cover the entire boundary
= 2 (l + b)
= 2(200 + 90)
= 580 m

3. (a) length of garden = 8 m
Width of garden= 5m
Perimeter of the garden = 2 (l + b)
= 2 (8 + 5)
= 26 m

(b) length of garden including path = 10 m
Width of garden including path = 7m



Perimeter of garden including
Path = 2(l + b)
= 2(10 + 7)
= 34 m

(c) Riya will need 34 m of fencing to cover the entire area including the path.

2. length of figure = 10 unit
breath of figure = 10 unit
Area of fig. = $l \times b$ = 10 unit × 10 unit
Perimeter of fig. = 2 ($l \times b$) = 2(10 + 10)
= 40 unit

3. The distance around a shape is called Perimeter

4. The area of rectangle = length × breath

5. The size of surface = Area of surface.

6. The area of the shaded part = 7 sq. unit

Puzzle time : **[Page no. 111]**

1. Perimeter of the figure = 7 cm + 5 cm + 7 cm + 5cm
= 24 cm

2. Perimeter of the figure = 13 cm + 13 cm + 16 cm
= 42 cm

3. Perimeter of the figure = 1 cm + 3 cm + 3 cm + 1 cm + 2.5 cm + 2.5 cm + 1 cm + 3 cm + 3 cm + 1 cm + 2.5 cm + 2.5 cm
= 26 cm

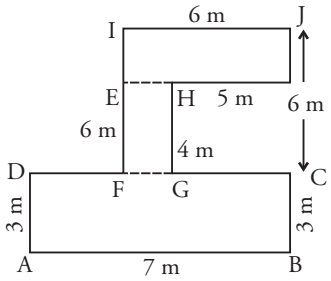
Hence, the figure (2) has the most perimeter and the figure (1) has the least perimeter.

Real life connections : **[Page No. 111]**

1. length of rectangle = 5 cm
breath of rectangle = 4 cm
Area of the rectangle = $l \times b$
= 5 cm × 4 cm
= 20 cm^2

2. Sides of the triangle are = 210m, 180m, 230m
Length of wire required to fence the field
= Perimeter of the triangle
= 210 m + 180 m + 230 m
= 620 m

3. Perimeter of the field =
6m + 6m + 6m + 5m + 6m + 3m + 3m + 7m
= 42 m



Area of the field =

Area of ABCD + Area of EFGH + Area of IE KJ

$= 7 \times 3 cm^2 + 4 \times 1 cm^2 + 2 \times 6 cm^2$

$= 21 cm^2 + 4 cm^2 + 12 cm^2$

$= 37 cm^2$

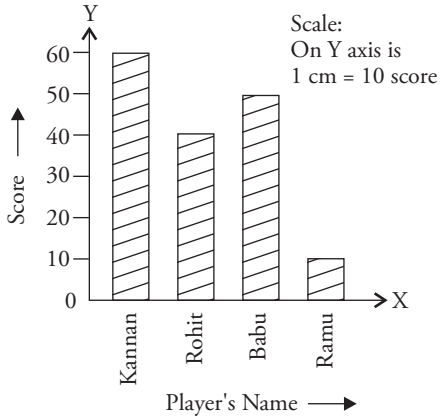
CHAPTER-14
Data handling

Rapid Refresh 1 : **[Page No. 114]**

1.

Stationary items	Count
Pencils	4
Erasers	2
Ruler	2
Text books	13
Notebook	10
Sharpner	1
Magazines	25

2.



Reflect your skills : **[Page No. 116]**

1. (a) Saturday 9
Thursday 7
Monday 5
Wednesday 4
Friday 2
Tuesday 1

(b) The minimum number of absentees is 1

(c) The absentees are maximum on Saturday

(d) The total number of absentees are 28.

2. (a) 9 students like sandwiches

(b) Pasta is least popular among the students

(c) 15 students like pizza

(d) Ice cream is most popular among the students.

(e) 9 students like burger

3. (a) The data is about the number of fruits

(b) 5 type of fruits are shown in the data

(c) Number of strawberries = 16

Number of bananas = 10

Number of strawberies more than bananas = 16

$$\begin{array}{r} -\ 10 \\ \hline 6 \end{array}$$

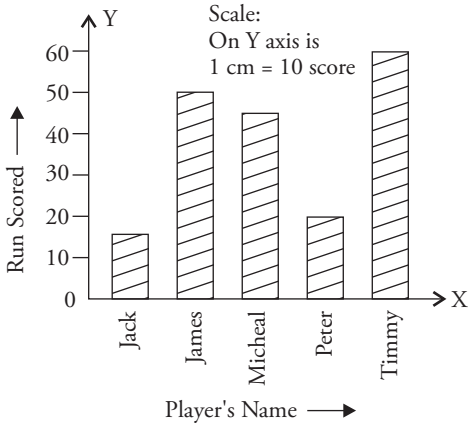
Hence 6 strawberries are more than banana.

(d) Apple is 12 in number.

(e) Total number of fruits are = 16 + 12 + 10 + 8 + 4

= 50

4.



(a) 40 chocolates sold on Thursday

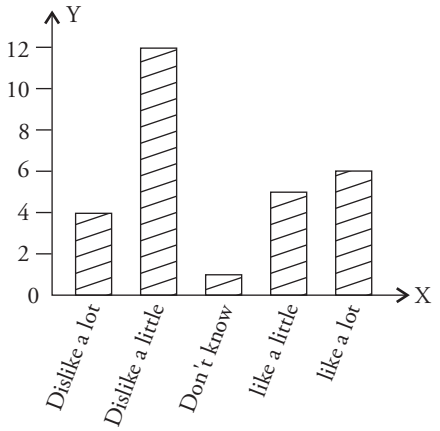
(b) Sale was maximum on Monday and it was 50.

(c) The sale was equal on Tuesday and Friday.

(d) Total chocolates sold in six days = 50 + 30 + 20 + 40 + 30 + 10 = 180

(e) The sale was minimum on Saturday . It was 10.

6.



Puzzle Time : **[Page No. 119]**

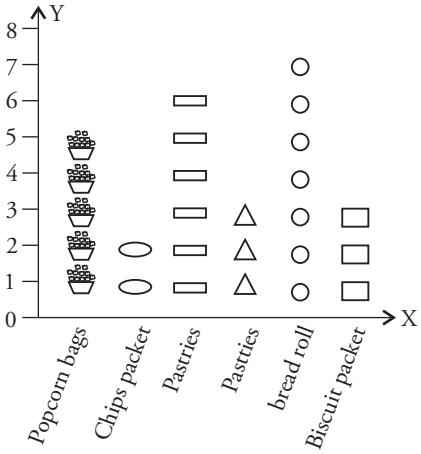
1. On Monday the maximum books were sold

2. On Wednesday the least book were sold

3. On Friday 8 books were sold.

4. 9 books were sold on Monday.

Real life connection : **[Page No. 120]**



❑❑

Math-4

CHAPTER-1
Revision

Rapid Refresh **[Page No. 5]**

1. (a) 5763 → Five thousand seven hundred sixty three.

(b) 3139 → Three thousand one hundred thirty nine.

(c) 4147 → Four thousand one hundred seventy six.

(d) 8295 → Eight thousand two hundred ninety five.

2. (a) 5678 (b) 4117

(c) 9710 (d) 2217

3. (a) 7000 + 300 + 60 + 4

(b) 3000 + 100 + 70 + 5

(c) 4000 + 300 + 00 + 9

(d) 6000 + 900 + 50 + 0

4. (a) 8222 (b) 6847

(c) 3628 (d) 3439

5. (a) < (b) <

(c) > (d) =

6. (a) 9606 (b) 7535

7. (a) 1925, 2963, 4999, 5909, 6945

(b) 2746, 3498, 4648, 5654, 6564

8. 1774, 1777, 1780, 1783, 1786, 1789, 1792

9. 2680, 2860, 2068, 2608, 2806, 2086, 6280, 6208, 6820, 6802, 6028, 6082, 8260, 8206, 8602, 8620, 8026, 8062

10. 3 6 4 9

→ 9

→ 40

→ 600

→ 3000

11. (a) 6862 (b) 3989

(c) 420 (d) 28

12. (a) 9 : 20 (b) 4 : 35

(c) 2 : 50

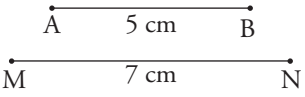
13. Number of men = 4500

Number of women = 4378

Number of children = 2112

Population of the town =10990

14.



15. (a) Cylinder (b) Sphere

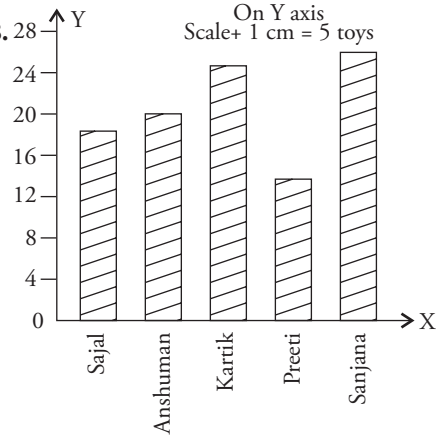
(c) Cone (d) Cube

16. (a) (32) (b) (64)

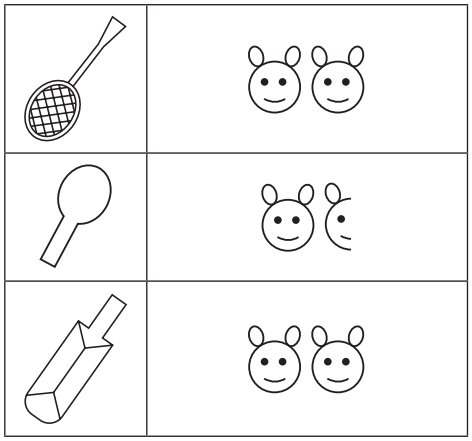
17. (a) Square (b) triangle, vertex

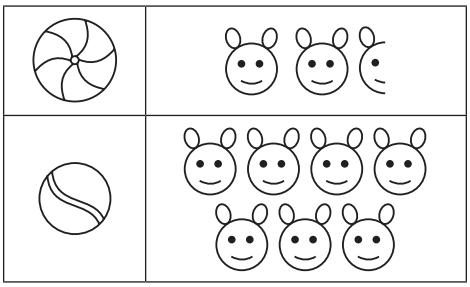
(c) Equal (d) two

18.



19. = 2 toys





20. Kangna give money to Ranaya = ₹ 5284

Kangna give money to Jiya = ₹ 3941

Money Kangana initially have = ₹ 9225

CHAPTER-2
Number System

Rapid Refresh 1 [Page No. 13]

1. (a) 10000 (b) 999999

(c) 21000 (d) 1,00,101

2. (a) Sixty eight thousand seven hundred forty two.

(b) Five lakh thirty four thousand two hundred seventy six

(c) Eight nine thousand one hundred twenty four

(d) Nine lakh ninety nine thousand nine hundred ninety nine.

3. (a) 7000 (b) 3000

(c) 9000 (d) 1000

4. (a) 20000 + 4000 + 300 + 60 + 5

(b) 500000 + 60000 + 7000 + 800 + 10 + 9

(c) 70000 + 8000 + 500 + 40 + 3

(d) 300000 + 20000 + 1000 + 400 + 80 + 7

5. (a) 56432 > 56431

(b) 1,23,456 < 1,32,456

(c) 78,324 < 78,423

(d) 6,54,321 > 6,53,432

6. (a) 75321 (b) 14689

(c) 874320 (d) 234569

7. (a) largest 5-digit number 99999

smallest 5-digit number – 10000

89999

(b) 4 5 6 2 1

+ 5 4 3 7 9

1 0 0 0 0 0

(c) 9 9 9 9 9 9

+ 1 0 0 0 0 0

1 0 9 9 9 9 9

(d) 9 8, 7 6 4

– 5 4, 3 2 1

4 4, 4 4 3

Rapid Refresh-2 [Page No. 18]

1. (a) 4300 (b) 60000

(c) 1,24,600 (d) 6,43,000

2. (a) LVI (b) XLIX

(c) LXXVIII (d) XXXIX

3. (a) Thirty four thousand five hundred sixty seven.

(b) Five hundred sixty eight thousand four hundred thirty two

(c) Seventy eight thousand nine hundred twelve.

(d) Six hundred forty three thousand two hundred seventy eight.

4. (a) XXIII (b) XLVII

(c) 65 (d) 86

Reflect your skills [Page No. 18]

1. (a) 9,7, 6,431 (b) 20589

2. (a) Six hundred twenty three thousand four hundred fifty one.

(b) Seven Lakh forty five thousand three hundred twenty one.

3. (a) 2000 (b) 600000, 6

4. (a) 70000 + 2000 + 600 + 80 + 5

(b) 5,00,000 + 40000 + 0000 + 300 + 60 + 2

5. 64528

6. (a) 3,57,921 is greater

(b) 6,41,025 is greater

7. 4,23,671; 4,23,761; 4,32,671, 4,32,761

8. (a) 99, 999 (b) 5,49,9998

9. (a) 87,341 (b) 13,478

10. (a) 79000 (b) 65000

11. (a) LXXXVI

(b) XLIII

Puzzle Time : [Page No. 19]

1. 4, 2, 5, 2, 99

2. 45,150 to 45,249

Real life connection [Page No. 19]

1. (a) Bags sold in January 43,578

Bags sold in February 52,694

More bages sold in February than in January 52,694

– 43,578

9, 116

(b) Number of bags sold in both Months

43,578
+ 52,694
96,272

2. (a) budget for residential building ₹ 8,45,000

Money spent ₹ 6,79,890

Money left ₹ 1,65,110

(b) Total budget ₹ 8,45,000

amount left ₹ 1,65,000

Hands On Activity [Page No. 20]

1. Start number 42,600

Target number 50,000

Steps to be followed

add 2000 44600

Subtract 600 44000

add 1000 45000

Round off to nearest thousand 50000

2. Do it yourself

CHAPTER-3
Addition

Rapid Refresh - 1 [Page No. 23]

1. (a)

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

(b) 788999

(c) 979997

(d) 525292

(e) 764318

(f) 542170

2. (a)

L	TTh	Th	H	T	O
1	2	3	0	3	3
	3	1	2	3	2
		3	0	0	1
		+		1	1
1	5	7	2	7	7

(b)

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

(c)

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

(d)

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

3. Profit earned in 2019 ₹ 2,30,146
Profit increased + ₹ 3, 25,422
Profit in 2020 ₹ 5, 55, 568

4. Toys produced in Ist year 3,80,176
Toys produced in 2nd year 4,05,203
Toys produced in two year 7,85,379

5. Painter earned during January ₹ 20,242
Painter earned during Frebruary ₹ 22,624
Painter earned during March ₹ 18,634
Painter earned in three months ₹ 61,500

6. International packages delievered 11015
domestic packages delievered 9408
Total packages delievered 20423

Rapid Refresh 2 **[Page No. 26]**

1. (a) 73016 (b) 35629
(c) 46381 (d) 7602
(e) 0 (f) 0
(g) 32981

2. (a)

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

(b)

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

(c)

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

3. (a)

Th	H	T	O
2	1	6	0
5	3	8	6
7	5	4	6

(b)

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

(c)

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

(d)

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

4. (a)

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

(b)

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

(c)

	TTh	Th	H	T	O
	2	1	3	8	7
	2	8	7	0	6
+	4	1	9	0	5
	9	1	9	9	8

(d)

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

Reflect your skills **[Page No. 26]**

1. (a)

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

(b)

	8	9	3	4	5
+	1	2	7	8	9
1	0	2	1	3	4

(c)

	6	7	8	9	0
+	3	4	1	2	3
1	0	2	0	1	3

(d)

	4	5	1	2	3
+	5	6	4	3	2
1	0	1	5	5	5

2. (a)

	3	4	5	6	7	8
+	4	5	6	7	8	9
	8	0	2	4	6	7

(b)

	1	2	3	4	5	6
+	2	3	4	5	6	7
	3	5	8	0	2	3

(c)

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

(d)

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

3. (a) Items sold in Janaury 6 7 8 9 0 items
Items sold in Frebruary + 7 8 6 5 4 items
Total items sold 1 4 6 5 4 4 items

4. Books is library last year 4 5 1 2 3 books
Books is library this year + 2 3 4 5 6 books
Total number of books library have
6 8 5 7 9 books

5. Vehicle travelled in 1st year 3 4 7 8 9 miles
Vehicle travelled in 2nd year + 4 5 6 7 8 miles
Total travelling in two years 8 0 4 6 7 miles

6. Population of city 2, 34, 567 people
new residents + 12, 345 people
new population 2,46,912 people

7. (a) 23,456 + 45,123 = 68,579
(b) 34,567 + 67,890 = 1,02,457
(c) 56,789 + 78,234 = 1,35,023
(d) 12,345 + 67,890 = 80,235
According to commutative property.
12,345 + 67,890 = 67,890 + 12,345
∴ 67,890 + 12,345 = 80,235

8. (a) (23,456 + 45,678) + 12,345
= 69134 + 12,345
= 81,479
23,456 + (45,678 + 12,345)
= 23,456 + 58,023
= 81,479

(b) 34567 + (56,432 + 10000)
= 34,567 + 66,432
= 1,00,999
(34567 + 56,432) + 10,000
= 90,999 + 10,000
= 1,00,999

(c) (89,345 + 12,789) + 34,123
= 1,02,134 + 34,123
= 1,36,257
89,345 + (12,789 + 34, 123)
= 89,345 + 46,912
= 1,36,257

(d) 56,432 + (78,345 + 23,456)
= 56,432 + 101,801
= 1,58,233
(56,432 + 78,345) + 23,456
= 1,34,777 + 23,456
= 1,58,233

Puzzle time **[Page No. 27]**

1. Apples in First truck = 23,456 Apples
Apples in second truck = 34,217 Apples
Total Apple in two truck 57673 Apples
Apple in third truck = ?
Total apples in three trucks 89,120 Apples
Apples in two trucks – 57,673 Aples
Apple in Third truck 31,447 Apples
There are 31,447 Apples in third truck.,

2. Riya had money ₹ 68,459
She left wish money – ₹ 35,287
She gave money to her friend ₹ 33,172

Bonus Questions
Riya wants total money ₹ 50,000
She already have money – ₹ 35,287
She needs to get more money ₹ 14,713

3. (a) Unit produced in the first three quarter
146,325 units
118,964 units
+ 132,578 units
397,867 units

(b) Factory need to produce unit in fourth Quartor
5,50,000
–3,97,867
1, 52, 133

Real Life Connection : **[Page No. 27]**

1. (a) Former plant total wheat seeds
23, 984
+ 6,210
30,194 wheat seeds

(b) Total number of planted rice seeds
18, 745
+ 4,356
23,101 rice seeds

(c) Total number of seeds planted
30, 194
23, 101
53, 295 seeds

2. (a) Total population of city A by the end of year 2020
43,256

12,489
6,752
62, 497

(b) 12,489
+ 6,752
19,241 people

(c) More Number of people can accomodate
70, 000
– 62,497
7, 503 more people

Hand -On Activity **[Page No. 28]**

1. Do it yourself
2. (a) Total money spend
₹ 13,450
₹ 2,675
₹ 4,980
₹ 1,825
₹ 22,930

(b) Money left for shopping
₹ 150,000
– ₹ 22,930
₹ 127,070

CHAPTER-4

Subtraction

Rapid Refresh 1 **[Page No. 32]**

1. (a)

TTh	Th	H	T	O
7	4	9	9	3
– 1	1	4	3	0
6	3	5	6	3

(b)

TTh	Th	H	T	O
9	2	7	7	5
– 2	1	4	5	1
7	1	3	2	4

(c)

TTh	Th	H	T	O
5	7	7	2	6
– 1	1	6	1	3
4	6	1	1	3

(d)

L	TTh	Th	H	T	O
6	3	8	5	1	5
– 1	2	9	6	6	9
5	0	8	8	4	6

(e)

L	TTh	Th	H	T	O
5	7	9	8	7	6
– 3	1	1	1	9	6
2	6	8	6	8	0

(f)

L	TTh	Th	H	T	O
8	5	7	8	2	3
– 2	9	6	9	9	6
5	6	0	8	2	7

2. (a)

6	2	9	0	1
– 3	1	6	0	0
3	1	3	0	1

(b)

2	0	6	1	6
–	5	0	4	0
1	5	5	7	6

(c)

8	7	8	9	9	9
–2	1	1	8	8	8
6	6	7	1	1	1

(d)

7	6	4	5	3	2
–4	5	3	1	1	2
3	1	1	4	2	0

(e)

6	7	5	9	5	0
–4	3	4	9	4	0
2	4	1	0	1	0

(f)

5	4	3	2	5	1
–4	2	1	1	4	0
1	2	2	1	1	1

Rapid Refresh-2 **[Page No. 33]**

1. Manisha had money ₹ 12,642
She had more money than Keshav –₹ 8,871
Keshav had money ₹ 3, 771

2. Fish in labe 1, 72, 392 fish
Fish in Pond 1, 89, 231 fish
More fish in pond than in labe 1,89,231 fish
1,72,392 fish
16, 839 fish

3. Total books in library = 36,897 books
Total books of science and mathematics
14,769 books
+ 14, 575 books
29,344 books
∴ Books of other subject 36,897 books
–29,344 books
7, 553 books

4. Total people in city 44,652 people
People moved to other town –2,689 people
People left in the city 41, 963 people

Rapid Refresh-3 **[Page No. 3]**

1. (a) 28173 (b) 82998
(c) 1 (d) 0
(e) 0 (f) 72998

2. (a) 18983 + 6678 – 9789
= 25661 – 9789
= 15872
(b) 252743 + 620301 – 119254
⇒ 873044 – 119254
= 753790
(c) 431296 + 217175 – 50178
= 648471 – 50178
= 598293
(d) 300192 + 432170 – 299429
732362 – 299429
= 432933
(e) 84796 – 9540 + 3400 – 2988
= 88196 – 12528
= 75668
(f) 529516 – 102053 + 25970 – 18325
⇒ 555486 – 120378
⇒ 435108

3. Sum of 5, 45, 327 and 3, 25, 173
5,45,327
+ 3,25,173
8,70,500
difference of 5,45,327 and 3,25,173
5,45,327
– 3,25,173
2,20,154
difference of 8, 70,500 and 2,20,154
8,70,500
–2,20,154
6,50,346

4. Total people in the ground 25,356 people
no. of men in the ground – 14,245 men
number of women 11,111 women
Estimated women = 11,100 women

5. Total buttons 34,364
blue buttons –16,745
Red buttons 17,619
Estimated heb button = 1800 buttons

Reflect your skills : **[Page No. 35]**

1. (a)

6	7	5	4	3
– 3	4	2	9	8
3	3	2	4	5

(b)

1	8	2	4	7	5
–	9	8	3	6	2
	8	4	1	1	3

(c)

8	9	7	6	5
– 3	2	4	5	1
5	7,	3	1	4

(d)

5	6	2	1	2	3
– 2	4	1	0	1	2
3	2	1	1	1	1

2. (a)

9	8	4	7	2
– 5	6	3	9	8
4	2	0	7	4

Check

5	6	3	9	8
+ 4	2	0	7	4
9	8	4	7	2

(b)

6	4	5	8	9	0
– 3	4	2	6	7	8
3	0	3	2	1	2

Check

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

3. (a) 0 [Subtraction of number from itself]
(b) No this is not same because subtraction is not commutative.

4. (a) 75,632 + 45,987 – 28,654
= 1,21,619 – 28,654
= 92,965
(b) 812,450 + 53,421 – 234,098
= 865,871 – 234,098
= 631,773
(c) (6,78,324 + 43,219) – (3,42,876 + 1,23,432)
= 7,21543 – 4,66,308
= 2,55,235

5. (a) Total students in school
= 75,230 students
graduated students
= – 20,785 studetns
students left in the school
= 54,445 students
(b) Ordered items 98,745
Sold items –54,390
items remain in the store
44,355 items
(c) Units produced in the first half
254,789 units
Units produced in the second half
398,432 units
more units produced in the second half as compared to the first half
398,432 units
–254,789 units
143,643 units

(d) A company earned in 2022 ₹ 675,432
Company earned in 2023 ₹ 543,218
more earning of company in 2022 as compared to 2023 ₹ 675,432
– ₹ 543, 218
₹ 132,214

6. 765,432 – 5,43,298 = 2,22,134
Check 543298
+ 222134
765432

Puzzle Time : **[Page No. 36]**

1. ABCDE — 54,321 = 11,111
65432
– 54321
11,111

2. Sailing price of painting = 6,78,245
remaining money = – 4,87,980
Money deducted for fees and taxes
= 1,90,265
Verification 4,87,980
+ 1,90,265
6,78,245

Real life connection **[Page No. 36]**

1. Total Budget of a Company ₹ 8,50,000
Spent Money = ₹ 3,78, 459
+ ₹ 1,98, 764
₹ 5,77, 223
Remaining Budget = ₹ 8,50, 000
– ₹ 5,77, 223
₹ 2,72, 777

2. Received cars = 4,75,890
Sold cars = –2,98,765
Unsold cars = 1,77,125
Verification 2,98,765
+ 1,77,125
4,75,890

Hand on Activity : **[Page No. 36]**

Do it yourself

CHAPTER-5
Multiplication

Rapid Refresh 1 **[Page No. 41]**

1. (a) 152 (b) 1
(c) 375 (d) 0
(e) 0 (f) 0

2. (a) 38 (b) 247
(c) 540 (d) 215

3. (a) 16 (b) 73
(c) 82 (d) 93

4. (a) 15 (b) 80

5. (a) 3450 (b) 20370
(c) 9800 (d) 57300
(e) 6400 (f) 328000

6. (a) 15360 (b) 23,600
(c) 76200 (d) 206800
(e) 1314000 (f) 4152000

7. (a) 63 × (2 × 5)
= 63 × 10
= 630
(b) 97 × (20 × 5)
= 97 × 100
= 9700
(c) 73 × (50 × 2)
= 73 × 100
= 7300
(d) 37 × (4 × 125)
= 37 × 500
= 18500

Rapid Refresh -2 **[Page No. 42]**

1. Cookies baked in one day = 150 cookies
Cookies baked in six day = 150 cookies × 6
= 900 cookies

2. Pencils needed by one student = 8 Pencils
Pencils needed by 320 student
= 8 Pencils × 320
= 2560 Pencils

3. One shelf hold books = 245 books

48 shelf hold books = 245 books × 48

= 11,760 books

4. 1 box contains items = 125 items

256 box contain item = 256 × 125 items

= 32,000 items

Reflect Your skills : **[Page No. 42]**

1. (a)

```
   2 3 5
   × 1 6
 -------
 1 4 1 0
 2 3 5 ×
 -------
 3 7 6 0
```

(b)

```
        5 7 3
      × 2 3 4
  -----------
      2 2 9 2
    1 7 1 9 ×
  1 1 4 6 × ×
  -----------
  1 3 4 0 8 2
```

(c)

```
        8 0 9
      × 1 2 7
  -----------
      5 6 6 3
    1 6 1 8 ×
    8 0 9 × ×
  -----------
  1 0 2 7 4 3
```

(d)

```
      8 7 6
      × 5 4
  ---------
    3 5 0 4
  4 3 8 0 ×
  ---------
  4 7 3 0 4
```

2. 123 (40 + 5)

= 123 × 40 + 123 ×5

= 4920 + 615

= 5535

3. 89 × 56 → 89 × (50 + 6)

= 89 × 50 + 89 × 6

= 4450 + 534

= 4984

4. Bottle of juices sold each day — 48 bottles

Bottle sell in 365 days — 365 × 48

= 365 × (40 + 8)

= 14600 + 2920

= 17520 bottles

5. Total students = 456 students

Total notebooks needed by 1 student = 12 notebooks

Total notebooks needed = 456 students × 12 notebooks

= 5472 notebooks

6. Toys produced in each day = 128 toys

Toys produced in 250 day = 128 × 250

= 32000 Toys

7. (25 × 4) × 10

= 100 × 10

= 1000

8. 378 × 26

= (300 + 70 + 8) × 26

= 7800 + 1820 + 208

= 9,828

9. Total fruit crates = 45 crates

fruits in each crates = 156 fruits

Total fruits deleivered in one day = 45 × 156

```
    1 5 6
    × 4 5
  -------
    7 8 0
  6 2 4 ×
  -------
  7 0 2 0
```

Fruits delievered in 10 days = 7020 × 10

= 70200 fruits.

10. Books sold in January = 3,458 books

Books sold in february = 2,678 books

Total books sold = 3,458 + 2,678

= 6,136 books

Cost of 1 books = ₹ 150

Cost of 6136 books = 6136 × 150

= 920,400

Puzzle Time **[Page No. 43]**

1. 960 ÷ 12

= 80, so the number is 80

[Bonus : 80 × 25 = 2000]

2. Total set of building blocks = 15

1 set contain building block = 124

Total blocks = 124 × 15

= 1860 blocks

[Bonus : If we add 3 more set than

Total set are 18 and total no of blocks

in 18 sets are — 124 × 18

= 2232 block

```
  1 2 4
×   1 8
-------
  9 9 2
1 2 4 ×
-------
2 2 3 2
```

Real life connection : **[Page No. 43]**

1. Toys procduced in one day = 245 Toys

Toys produced in 125 days = 245 × 125

```
    2 4 5
×   1 2 5
---------
  1 2 2 5
  4 9 0 ×
+ 2 4 5 × ×
---------
3 0 6 2 5  Toys
```

Hence, 30625 toys produced in 125 days.

Bonus : Toys produced for 10 weekeneds

= 50 × 10

= 500 toys

So Total Toys produced

```
30625  toys
+ 500  toys
-----------
31125  toys
```

2. (a) Trees in each row = 86 trees

Trees in 32 rows = 86 × 32

= 2 7 5 2 Trees

```
  8 6
× 3 2
-----
  1 7 2
2 5 8 ×
-------
2 7 5 2
```

Hence Total 2752 trees are planted.

(b) If 14 more rows are added

then total rows = 32 + 14 = 46 rows

total trees in 45 rows = 46 × 86

```
  8 6
× 4 6
-----
  5 1 6
3 4 4 ×
-------
3 9 5 6  trees
```

So total trees are 3956 trees

Hands On Activity : **[Page No. 43]**

Do it yourself

CHAPTER-6
Division

Rapid Refresh 1 **[Page No. 45]**

1. Total candies = 20 candies

Total children = 5 children

5 children get candies = 20 candies

1 child get candies = 20 ÷ 5

= 4 candies

2. Pencils in 9 boxes = 36 pencils

Pencils in 1 box = 36 ÷ 9

= 4 Pencils

3. 9 cookies given to = 1 friend

1 cookie given to = $\frac{1}{9}$ friend

45 cookies given to = $\frac{1}{9}$ × 45 friends

= 5 friends

Hence 5 friends get 45 cookies

4. 4 students are there in = 1 group

1 student is there in = $\frac{1}{4}$ group

32 student are there in = $\frac{1}{4} \times 32$ groups

= 8 groups

There will be 8 groups

Rapid Refresh 2 **[Page No. 47]**

1. (a) 2345 (b) 0

(c) 1 (d) 7832

(e) 0 (f) 0

(g) Dividend

(h) remainder (i) 0

2. (a) 8624 ÷ 4

```
   2 1 5 6
4 ) 8 6 2 4 (
  –8
  ---
   0 6
  – 4
  ---
     2 2
   –2 0
  ----
       2 4
    – 2 4
    -----
         0
```

quotient = 2156

remainder = 0

8624 ÷ 4 = 2156

dividend = divisor × quotient + remainder

= 2156 × 4 + 0

= 8624 + 0 = 8624

(b) 1377 ÷ 3 = 459

```
   4 5 9
3 ) 1 3 7 7 (
  –1 2
  ----
     1 7
   – 1 5
   -----
       2 7
     – 2 7
     -----
         0
```

Check : dividend = divisor × quotient + remainder 459 × 3 + 0

= 1377

(c) 1255 ÷ 6

```
   2 0 9
6 ) 1 2 5 5 (
  –1 2
  ----
   0 5 5
   – 5 4
   -----
       1
```

= quotient — 209

= Remainder —1

Check : divided = divisor × quotient + Remainder

= 6 × 209 + 1

= 1254 + 1

= 1255

(d) 6012 ÷ 3

```
   2 0 0 4
3 ) 6 0 1 2 (
  –6
  --
   0
  –0
  --
   1 2
  –1 2
  ----
     0
```

quotient = 2004

Remainder = 0

Check : dividend = divisor × quotient + Remainder

= 3 × 2004 + 0

= 6012 + 0

= 6012

(e) 9314 ÷ 5

```
     1862
5 ) 9 3 1 4 (
    –5
    --
    4 3
   –4 0
   ----
     3 1
    –3 0
    ----
     1 4
    –1 0
    ----
       4
```

= quotient = 1862

Remainder = 4

Check : dividend = divisor × quotient + remainder

= 1862 × 5 + 4
= 9310 + 4
= 9314

(f) 1565 ÷ 2

```
   7 8 2
2 ) 1 5 6 5 (
  –1 4
   1 6
   1 6
   0 0 5
       4
       1
```

= quotient = 782

Remainder = 1

Check : divisor × quotient + remainder

2 × 782 + 1

= 1564 + 1 = 1565

Rapid Refresh-3 **[Page No. 51]**

1. (a) 5140 ÷16

```
     3 2 7
16 ) 5 1 4 0 (
     4 8
   × 4 4
     3 2
     1 2 0
     1 1 2
     × × 8
```

= quotient 327

Remainder = 8

(b) 7008 ÷ 14

```
     5 0 0
14 ) 7 0 0 8 (
     7 0
     × × 0 8
```

Quotient = 500

Remainder = 8

(c) 8014 ÷ 16

```
     5 0 0
16 ) 8 0 1 4 (
    –8 0
     0 1 4
```

Quotient = 500

Remainder = 14

(d) 2175 ÷ 15

```
     1 4 5
15 ) 2 1 7 5 (
    –1 5
     6 7
    –6 0
       7 5
     – 7 5
       0
```

Quotient = 145

Remainder = 0

(e) 4244 ÷ 13

```
     3 2 6
13 ) 4 2 4 4 (
    –3 9
     3 4
    –2 6
       8 4
     – 7 8
       6
```

Quotient = 326

Remainder = 6

(f) 7891 ÷ 19

```
     4 1 5
19 ) 7 8 9 1 (
    – 7 6
     2 9
    – 1 9
       1 0 1
     – 9 5
       6
```

Quotient = 415

Remainder = 6

2. (a) 53505 ÷ 15

```
     3 5 6 7
15 ) 5 3 5 0 5 (
     4 5
   × 8 5
     7 5
     1 0 0
       9 0
     1 0 5
     1 0 5
     × × ×
```

Quotient = 3567

Remainder = 0

(b) 62407 ÷ 14

```
      4 4 5 7
   14 ) 6 2 4 0 7 (
      –5 6
        6 4
      –5 6
        8 0
      –7 0
        1 0 7
      –  9 8
          9
```

Quotient = 4457
Remainder = 9

(c) 82410 ÷ 16

```
      5 1 5 0
   16 ) 8 2 4 1 0 (
      –8 0
        2 4
      –1 6
        8 1
      –8 0
        1 0
```

Quotient = 5150
Remainder = 10

(d) 92994 ÷ 11

```
      8 4 5
   11 ) 9 2 9 9 4 (
      –8 8
        4 9
      –4 4
        5 9
      –5 5
        4 4
      –4 4
          0
```

Quotient = 845
Remainder = 0

(e) 10052 ÷ 19

```
      5 2 9
   19 ) 1 0 0 5 2 (
      –9 5
        5 5
      –3 8
        1 7 2
      –1 7 1
          1
```

Quotient : 529
Remainder : 1

(f) 51673 ÷ 25

```
      2 0 6 6
   25 ) 5 1 6 7 3 (
      –5 0
        1 6 7
      –1 5 0
          1 7 3
        –1 5 0
            2 3
```

Quotient : 2066
Remainder : 1

3. (a) 62504 ÷ 56

```
      1116
   56 ) 6 2 5 0 4 (
      –5 6
        6 5
      –5 6
          9 0
        –5 6
            3 4 4
          –3 3 6
            0 0 8
```

Quotient 1116
Remainder : 8

(b) 69544 ÷ 92

```
      7 5 5
   92 ) 6 9 5 4 4 (
      –6 4 4
        5 1 4
      –4 6 0
          5 4 4
        –4 6 0
            8 4
```

Quotient = 755
Remainder = 84

(c) 56703 ÷ 3

```
      6 8 3
   83 ) 5 6 7 0 3 (
      –4 9 8
        6 9 0
      –6 6 4
          2 6 3
        –2 4 9
            1 4
```

Quotient 683
Remainder 14

(d) 198404 ÷ 99

```
       2 0 0 4
   99 )1 9 8 4 0 4
     –1 9 8
       0 4 0 4
        –3 9 6
             8
```

Quotient = 2004

Reminder = 8

(e) 674952 ÷ 65

```
       1 0 3 4 3
   65 )6 7 4 9 5 2
       6 5
       × 2 4 9
         1 9 5
           5 4 5
           5 2 0
           × 2 5 2
             1 9 5
               5 7
```

Quotient — 10343

Remainder = 57

(f) 498208 ÷ 38

```
       1 3 1 1 0
   38 )4 9 8 2 0 8
     –38
       1 1 8
      –1 1 4
         4 2
        –3 8
           4 0
          –3 8
           2 8
```

Quotient : 13110

Remainder = 28

4. (a) 1625 ÷ 10

```
       1 6 2
   10 )1 6 2 5
     –1 0
         6 2
        –6 0
           2 5
          –2 0
             5
```

Quotient = 162

Remainder = 5

(b) 1008 ÷ 10

```
       100
   10 )10 0 8
     –1 0
       0 0 8
```

Quotient = 100

Remainder = 8

(c) 4141 ÷ 10

```
       4 1 4
   10 )4 1 4 1
     –4 0
       1 4
      –1 0
         4 1
        –4 0
           1
```

Quotient = 414

Remainder = 1

(d) 1736 ÷ 100

```
        1 7
   100 )1 7 3 6
       –1 0 0
         7 3 6
        –7 0 0
           3 6
```

Quotient = 17

Remainder = 36

(e) 25004 ÷ 100

```
        2 50
   100 )2 5 0 0 4
       –2 0 0
         5 0 0
        –5 0 0
           0 4
```

Quotient = 250

Remainder = 4

(f) 80542 ÷ 100

```
        8 0 5
   100 )8 0 5 4 2
       –8 0 0
         5 4 2
        –5 0 0
           4 2
```

Quotient = 805

Remainder = 42

(g) 6952 ÷ 1000

$$\begin{array}{r} 6 \\ 1000\overline{)6952} \\ -6000 \\ \hline 952 \end{array}$$

Quotient = 6

Remainder = 952

(h) 370082 ÷ 1000

$$\begin{array}{r} 370 \\ 1000\overline{)370082} \\ -3000 \\ \hline 7008 \\ -7000 \\ \hline 82 \end{array}$$

Quotient = 370

Remainder = 82

(i) 854019 ÷ 1000

$$\begin{array}{r} 854 \\ 1000\overline{)854019} \\ -8000 \\ \hline 5401 \\ -5000 \\ \hline 4019 \\ -4000 \\ \hline 19 \end{array}$$

Quotient = 854

Remainder = 19

5. (a) Dividend = Divisor × Quotient + remainder

54164 = 60 × Quotient + Remainder

$$\begin{array}{r} 902 \\ 60\overline{)54164} \\ -540 \\ \hline 164 \\ -120 \\ \hline 44 \end{array}$$

Quotient = 902

Remainder = 44

(b) dividend = Quotient × Divisor + Remainder

18469 = 83 × Divisor + 43

$$\text{Divisor} = \frac{18469 - 43}{83} = \frac{18426}{83}$$

$$\begin{array}{r} 222 \\ 83\overline{)18426} \\ -166 \\ \hline 182 \\ -166 \\ \hline 166 \\ -166 \\ \hline 0 \end{array}$$

= 222

(c) Dividend = ?

Quoteint = 976

Divisor = 62

Remainder = 12

Dividend = Divisor × quotient + Remainder

= 62 × 976 + 12

= 60,524

(d) Dividend = ? Quotient = 263 Divisor = 57 Remainder = 43

Dividend = Divisor × Quotient + Remainder

= 57 × 263 + 43

= 15034

Rapid Refresh 4 **[Page No. 52]**

1. Plants to be plant in 36 Parks = 125, 388 trees

Plant will be planted in 1 park = 125, 388 trees ÷ 36

= 3,483 tress

2. Rice in 25 trucks = 1,82,750 kg

Rice in 1 truck = 1,82,750 ÷ 25

= 7310 kg

3. Food pack in 60 villages = 3,76,200 food packs

Food pack in 1 village = 3,76,200 ÷ 60

= 6270 food pack

4. Notebooks distributed in 32 school 1,05,600

Notebooks received in 1 school

1,05,600 ÷ 32 = 3300 notebooks

```
    3300
32 ) 105600 (
   –96
    96
   –96
    00
    00
     0
     0
```

5. 50 worker complete tasks = 62,500 tasks

1 worker complete task = 62,500 ÷ 50

= 1250 tasks

```
    1250
50 ) 62500 (
   –50
    125
   –100
     250
     250
       00
       00
       00
```

Rapid Refresh 5 **[Page No. 53]**

1. 42 ÷ 7 = 6

42 ÷ 6 = 7

2. Total Candies = 24

4 Candies will be get by = 1 friend

1 Candy will be get by = 1/4 friend

24 candies will be get by

$= \frac{1}{4} \times 24 = 6$ friends

Here 6 friend will get 24 candies.

3. 81 ÷ 9 = 9

Check 9 × 9 = 81

4. 5 × 8 = 40

Check = 40 ÷ 8 = 5

40 ÷ 5 = 8

Reflect your skills

1. (a)

```
    402
16 ) 6432 (
   –64
    032
    –32
     ×
```

Ans. 402

(b)

```
    15496
12 ) 185960 (
   –12
    65
   –60
     59
    –48
      116
     –108
       80
      –72
        8
```

Ans. 15496

(c)

```
    2847
90 ) 256280 (
   –180
     762
    –720
      428
     –360
       680
      –630
        500
       –450
         50
```

Ans. 2847

2.

```
    1907
24 ) 45768 (
   –24
    217
    216
      168
     –168
        0
```

Quotient = 1907

[Bonus : Remainder = 0]

3.

```
    123
100 ) 12345 (
   –100
     234
    –200
      345
     –300
       45
```

Quotient = 123

[Bonus : If divisor is 1000]

```
          12
1000 ) 12345 (
       -1000
        2345
       -2000
         345
```

Quotient = 12

4.

```
          150
50 ) 7528 (
       -50
        252
       -250
         028
```

Quotient = 150

Remainder = 28

Rounding the Quotient 150

Ans is 150

5.

```
          81
45 ) 3678 (
       -360
         78
        -45
         33
```

Quotient = 81

Remainder = 33

6.

```
          27
1000 ) 27000 (
       -2000
         7000
        -7000
           000
```

Quotient = 27

Remainder = 0

7.

```
          3373
25 ) 84325 (
       -75
         93
        -75
         182
        -175
          75
         -75
           0
```

Quotient = 3373

Rounded quotient = 3370

8.

```
          245
40 ) 9800 (
       -80
         180
        -160
          200
         -200
            0
```

Quotient = 245

9.

```
          1344
55 ) 73920 (
       -55
         189
        -165
          242
         -220
          220
         -220
            0
```

Quotient = 1344

[Bonus : 55 completely divides 73920, 1344 times]

10. (a) 25 bottles holded in = 1 box

1 bottle hold in = $\frac{1}{25}$ box

2800 bottles holded in

$= \frac{1}{25} \times 2800$ box

= 112 box

(b) Bottles broken = 7 bottles

Bottles left = 2800 – 7 = 2793 bottles

Boxes packed

```
          111
25 ) 2793 (
       -25
         29
        -25
          43
         -25
          18
```

Hence 111 boxes can be packed and 18 bottles are left unpacked.

11.

Dividend	8960	8960	8960	3000	3000	3000	4500	4500	4500
Divisor	10	100	1000	10	100	1000	10	100	1000
Quotient	896	89	8	300	30	3	450	45	4
Remainder	0	60	960	0	0	0	0	0	500

12. Total pens = 47000 pens
Total school = 100 school
(a) 100 school get = 47000 pens
1 school get = 47000 ÷ 100
= 470 pens
(b) damage pens = 100
remaining pens = 46900 pens
100 school get = 46900 pens
1 school get = 46900 ÷ 100
= 469 pens

Puzzle time : **[Page No. 54]**

1. (a) Total Apples = 756 apples
12 apples can be put in → 1 basket
1 apple can be put in → $\frac{1}{12}$ basket
756 apples can be put in → $\frac{1}{12} \times 756$ basket
= 63 basket.

(b) spoiled apples = 4 apples
remaining apples = (756 – 4) apples = 752 apples
no of basket having apples = 752 ÷ 12

$$\begin{array}{r} 62 \\ 12\overline{)752} \\ -72 \\ \hline 32 \\ -24 \\ \hline 8 \end{array}$$

= 62 basket and
8 apples will be left

2. (a) Total Pencils = 10,000 Pencils
Total classrooms = 25 classrooms
25 classrooms get pencils = 10000 pencils
1 classroom get pencils = $\frac{10000}{25}$ pencils
= 400 pencils

∵ If pencils left after dividing = 5 pencils
∴ Pencils distributed = 10000 – 5
= 9995 pencils.

Real life connection **[Page No. 54]**

1. Number is 54

2. Number is 65

3. (a) Total page = 864 Pages
Total days = 12 days
Pages read in 12 days = 864 Pages
Pages read in 1 days = 864 ÷ 12

$$\begin{array}{r} 72 \\ 12\overline{)864} \\ -84 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

So Riya should read 72 Pages in one day.

(b) If she read 10 pages extra on first day then total pages she read on first day
= 72 + 10 = 82 Pages
Pages left for reading in next 11 days = 864 – 82 = 782 Pages

Hands on Activity : **[Page No. 54]**

Do It Yourself

CHAPTER-7

Fractions

Rapid Refresh 1 **[Page No. 57]**

1. (a) Improper
(b) Proper
(c) Unit
(d) Mixed

2. (a) Like fraction
(b) Unlike fraction

(c) Unlike fraction

(d) Like fraction

3. (a) Improper fraction

(b) Improper fraction

(c) Unit fraction

(d) Unit fraction

(e) Mixed fraction

(f) Proper 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

Rapid Refresh : 2 **[Page No. 58]**

1. (a) $4\frac{1}{8} = \frac{8\times4+1}{8}$

$= \frac{33}{8}$

(b) $3\frac{7}{9} = \frac{9\times3+7}{9}$

$= \frac{34}{9}$

(c) $4\frac{4}{9} = \frac{9\times4+4}{9}$

$= \frac{34}{5}$

(d) $6\frac{4}{5} = \frac{5\times6+4}{5}$

$= \frac{34}{5}$

(e) $8\frac{7}{9} = \frac{9\times8+7}{9}$

$= \frac{79}{9}$

(f) $5\frac{13}{17} = \frac{17\times5+13}{17}$

$= \frac{98}{17}$

(g) $5\frac{1}{15} = \frac{15\times5+1}{15}$

$= \frac{76}{15}$

(h) $10\frac{2}{3} = \frac{3\times10+2}{3}$

$= \frac{32}{3}$

2. (a) $\frac{15}{7}$

$$\begin{array}{r} 2 \\ 7\overline{)15} \\ -14 \\ \hline 1 \end{array}$$

$= 2\frac{1}{7}$

(b) $\frac{19}{5}$

$$\begin{array}{r} 3 \\ 5\overline{)19} \\ -15 \\ \hline 4 \end{array}$$

$= 3\frac{4}{5}$

(c) $\frac{31}{4}$

$$\begin{array}{r} 7 \\ 4\overline{)31} \\ -28 \\ \hline 3 \end{array}$$

$= 7\frac{3}{4}$

(d) $\frac{38}{9}$

$$\begin{array}{r} 4 \\ 9\overline{)38} \\ -36 \\ \hline 2 \end{array}$$

$= 4\frac{2}{9}$

(e) $\frac{20}{8}$

$$8\overline{)20}\ (2,\ -16,\ 4)$$

$4\frac{2}{8}$

(f) $\frac{49}{2}$

$$2\overline{)49}\ (24,\ -4,\ 09,\ -8,\ 1)$$

$= 24\frac{1}{2}$

(g) $\frac{39}{4}$

$$4\overline{)39}\ (9,\ -36,\ 3)$$

$= 9\frac{3}{4}$

(h) $\frac{127}{15}$

$$15\overline{)127}\ (8,\ -120,\ 7)$$

$= 8\frac{7}{15}$

Rapid Refresh 3 **[Page No. 59]**

1. (a) $\frac{3}{5}$

$\frac{3}{5}\times\frac{2}{2}=\frac{6}{10}$

$\frac{3}{5}\times\frac{3}{3}=\frac{9}{15}$

$\frac{3}{5}\times\frac{4}{4}=\frac{12}{20}$

$\frac{3}{5}\times\frac{5}{5}=\frac{15}{25}$

(b) $\frac{4}{7}$

$\frac{4}{7}\times\frac{2}{2}=\frac{8}{14}$

$\frac{4}{7}\times\frac{3}{3}=\frac{12}{21}$

$\frac{4\times4}{7\times4}=\frac{16}{28}$

$\frac{4\times5}{7\times5}=\frac{20}{35}$

(c) $\frac{5}{8}$

$\frac{5}{8}\times\frac{2}{2}=\frac{10}{16}$

$\frac{5}{8}\times\frac{3}{3}=\frac{15}{24}$

$\frac{5}{8}\times\frac{4}{4}=\frac{20}{32}$

$\frac{5}{8}\times\frac{5}{5}=\frac{25}{40}$

(d) $\frac{9}{11}$

$\frac{9}{11}\times\frac{2}{2}=\frac{18}{22}$

$\frac{9}{11}\times\frac{3}{3}=\frac{27}{33}$

$\frac{9}{11}\times\frac{4}{4}=\frac{36}{44}$

$\frac{9}{11}\times\frac{5}{5}=\frac{45}{55}$

2. Fraction = $\frac{5}{9}$

(a) numerator = 55

$$\frac{5\times11}{9\times11}=\frac{55}{99}$$

(b) denominator 63

$$\frac{5\times7}{9\times7}=\frac{35}{63}$$

(c) numerator 60

$$\frac{5\times12}{9\times12}=\frac{60}{108}$$

(d) denominator 27

$$\frac{5\times3}{9\times3}=\frac{15}{27}$$

3. Fraction = $\frac{35}{40}$

(a) numerator 7

$$\frac{35\div5}{40\div5}=\frac{7}{8}$$

(b) denominator 8

$$\frac{35\div5}{40\div5}=\frac{7}{8}$$

4. (a) $\frac{6}{7}$ and $\frac{9}{21}$

$$\frac{6}{7}=\frac{9}{21}$$

$6 \times 21 = 9 \times 7$

$126 = 63$

This, fraction is not equivalent

(b) $\frac{2}{7}$ and $\frac{8}{28}$

$$\frac{2}{7}=\frac{8}{28}$$

$2 \times 28 = 8 \times 7$

$56 = 56$

This, fraction is equivalent

(c) $\frac{4}{9}$ and $\frac{36}{84}$

$$\frac{4}{9}=\frac{36}{84}$$

$4 \times 84 = 9 \times 36$

$336 = 324$

This, fraction is not equivalent

(d) $\frac{25}{45}$ and $\frac{10}{18}$

$$\frac{25}{45}=\frac{10}{18}$$

$25 \times 18 = 45 \times 10$

$450 = 450$

This, fraction is equivalent

5. (a) $\frac{5}{9}=\frac{x}{81}$

$9 \times x = 5 \times 81$

$$x=\frac{5\times81}{9}$$

$x = 45$

(b) $\frac{1}{2}=\frac{x}{4}$

$2 \times x = 4 \times 1$

$$x=\frac{1\times4}{2}$$

$x = 2$

(c) $\frac{3}{4}=\frac{9}{x}$

$3 \times x = 9 \times 4$

$$x=\frac{9\times4}{3}$$

$x = 12$

(d) $\frac{2}{3}=\frac{x}{12}$

$3 \times x = 2 \times 12$

$$x=\frac{2\times12}{3}$$

$x = 8$

(e) $\frac{4}{7}=\frac{20}{x}$

$4 \times x = 20 \times 7$

$x = \frac{20\times 7}{4}$

$x = 35$

(f) $\frac{7}{35}=\frac{x}{175}$

$35 \times x = 7 \times 175$

$x = \frac{7\times 175}{35} = 35$

Rapid Refresh 4 **[Page No. 61]**

1. (a) $\frac{3}{6}-\frac{2}{6}=\frac{3-2}{6}=\frac{1}{6}$

(b) $\frac{8}{9}-\frac{4}{9}=\frac{8-4}{9}=\frac{4}{9}$

(c) $\frac{6}{12}-\frac{3}{12}=\frac{6-3}{12}=\frac{3}{12}=\frac{1}{4}$

2. (a) $\frac{5}{10}+\frac{2}{10}+\frac{2}{10}=\frac{5+2+2}{10}=\frac{9}{10}$

(b) $\frac{1}{16}+\frac{3}{16}+\frac{5}{16}=\frac{1+3+5}{16}=\frac{9}{16}$

(c) $\frac{4}{27}+\frac{5}{27}+\frac{2}{27}=\frac{4+5+2}{27}=\frac{11}{27}$

3. (a) $\frac{2}{7}+\frac{3}{7}=\frac{2+3}{7}=\frac{5}{7}$

(b) $\frac{4}{5}+\frac{1}{5}=\frac{4+1}{5}=\frac{5}{5}=1$

(c) $\frac{2}{5}+\frac{2}{5}=\frac{2+2}{5}=\frac{4}{5}$

4. (a) $\frac{8}{13}-\frac{6}{13}=\frac{8-6}{13}=\frac{2}{13}$

(b) $\frac{7}{9}-\frac{4}{9}=\frac{7-4}{9}=\frac{3}{9}=\frac{1}{3}$

(c) $\frac{5}{18}-\frac{4}{18}=\frac{5-4}{18}=\frac{1}{18}$

5. (a) $\frac{4}{11}\times\frac{2}{3}=\frac{8}{33}$

(b) $\frac{9}{17}\times\frac{7}{2}=\frac{9\times 7}{17\times 2}=\frac{63}{34}$

(c) $\frac{11}{20}\times\frac{20}{3}=\frac{11\times 20}{20\times 3}=\frac{11}{3}$

6. (a) $\frac{5}{10}\div\frac{5}{12}=\frac{5}{10}\times\frac{12}{5}=\frac{5\times 12}{10\times 5}=\frac{6}{5}$

(b) $\frac{4}{8}\div\frac{4}{10}=\frac{4}{8}\times\frac{10}{4}=\frac{4\times 10}{8\times 4}=\frac{5}{4}$

(c) $\frac{9}{12}\div\frac{9}{24}=\frac{9}{12}\times\frac{24}{9}=\frac{9\times 24}{12\times 9}=2$

Rapid Refresh.5 **[Page No. 62]**

1. (a) Rito's sister ate cake = $\frac{1}{6}\times 12$ peices

= 2 pieces

(b) Rita's brother ate cake = $\frac{1}{4}\times 12$ peices

= 3 peices

(c) Her parents ate = $\frac{1}{3}\times 12$ pieces

= 4 pieces

(d) Pieces left with Rita {12 – (2 + 3 + 4)} pieces

= 12 – 9 pieces

= 3 pieces

2. $\frac{1}{3}$ of bananas = $\frac{1}{3}\times 12$ bananas = 4 bananas

$\frac{1}{2}$ of apples = $\frac{1}{2}\times 6$ apples = 3 apples

$\frac{2}{3}$ of oranges = $\frac{2}{3}\times 9$ oranges = 6 oranges

(a) They use 4 bananas

(b) They use apples = 3 apples

(c) They use oranges = 6 oranges

(d) Left over bananas = 12 – 3 = 9 bananas

left over Apples = 6 – 3 Apples = 3 Apples

Left over oranges = 9 – 6 oranges = 3 oranges

3. lemonade in jug = 12 glasses

Raj drink lemonade = $\frac{1}{3}\times 12$ glases = 4 glasses

Neha drank lemonade = $\frac{1}{4}\times 12$ glasses = 3 glasses

Aarav drink lemonade = $\frac{1}{6}\times 12$ glasses = 2 glasses

left lemonade = 12 – (4 + 3 + 2) glasses

= 12 – 9 glasses = 3 glasses.

Reflect your skills : **[Page No. 63]**

1. $\frac{3\times 3}{4\times 3}=\frac{9}{12}$, yes these are equivalent fractions

2. $\frac{5\times 2}{6\times 2}=\frac{10}{12}$

$\frac{5\times 3}{6\times 3}=\frac{15}{18}$

3. $\frac{11}{3}$ = $3\overline{)11}$ (3, -9, 2)

$= 3\frac{2}{3}$

4. yes we can find the equivalent fraction of $\frac{4}{7}$

$\frac{4\times 2}{7\times 2}=\frac{8}{14}$

5. $2\frac{5}{6}=\frac{6\times 2+5}{6}=\frac{17}{6}$

6. $\frac{8}{12}=\frac{2}{3}$

$3 \times 3 = 12 \times 2$

$24 = 24$

Yes they are equivalent fraction.

7. Total Pizza slices = 8 slices

Eaten slices = 3 + 2 = 5 slices

left slices = 8 – 5 = 3 slices

let x fraction of 8 slices = 3 slices

x of 8 = 3

$x \times 8 = 3$

$x = \frac{3}{8}$

8. Total parts in pizza = 6

Eaten parts = 2

left pizza = 6 – 2 = 4 parts

let x of 6 parts = 4 parts

x of 6 = 4

$x \times 6 = 4$

$x = \frac{4}{6}=\frac{2}{3}$

$x = \frac{2}{3}$

Hence $\frac{2}{3}$ part is left

9. $\frac{7\times 3}{9\times 3}=\frac{21}{27}$

$\frac{7\times 5}{9\times 5}=\frac{35}{45}$

10. (a) $\frac{5}{8}+\frac{6}{8}=\frac{11}{8}$

(b) $\frac{15}{21}+\frac{3}{21}=\frac{18}{21}=\frac{6}{7}$

(c) $\frac{23}{25}+\frac{19}{25}=\frac{42}{25}$

(d) $\frac{15}{36}-\frac{12}{36}=\frac{3}{36}=\frac{1}{12}$

(e) $\frac{12}{18}-\frac{9}{18}=\frac{3}{18}=\frac{1}{6}$

(f) $\frac{15}{20}-\frac{10}{20}=\frac{5}{20}=\frac{1}{4}$

(g) $\frac{6}{5}\times\frac{9}{12}=\frac{6\times 9}{5\times 12}=\frac{54}{60}=\frac{9}{10}$

(h) $\frac{3}{7}\times\frac{1}{6}=\frac{3\times 1}{7\times 6}=\frac{1}{42}$

(i) $\frac{4}{9}\times\frac{15}{3}=\frac{4\times15}{9\times3}=\frac{20}{9}$

(j) $\frac{23}{5}\div\frac{23}{5}=\frac{23}{5}\times\frac{5}{23}=\frac{23\times5}{5\times23}=\frac{1}{1}=1$

Puzzle Time : **[Page No. 64]**

1. The third number should be $\frac{3}{6}$

because $\frac{3}{6}$ is equivalent to $\frac{1}{2}$ and $\frac{2}{4}$

as $\frac{3}{6}=\frac{1}{2}=3\times2=6\times1$

$= 6 = 6$

$\frac{3}{6}=\frac{2}{4}$

$3 \times 4 = 6 \times 2$

$12 = 12$ Ans.

2. total fruits = 12 fruits

Total Apples = $\frac{1}{3}$ of $12 = \frac{1}{3}\times12=4$ apples

Total bananas = $\frac{1}{4}$ of 12

$= \frac{1}{4}\times12=3$ bananas

$\therefore$ Total oranges = $12-(4+3)=12-7=5$ oranges.

[Bonus : let x fraction of total fruits are oranges.]

x of $12 = 5$

$x \times 12 = 5$

$x = \frac{5}{12}$

Hence fraction is $\frac{5}{12}$ Ans.

Real life connection : **[Page No. 64]**

1. Total sugar sam wanted to used = $1\frac{3}{4}$ cup

$= \frac{7}{4}$ cups

But he used sugar = $\frac{5}{4}$ cups

Sam reduced the amount of sugar

$= \frac{7}{4}-\frac{5}{4}=\frac{7-5}{4}=\frac{2}{4}=\frac{1}{2}$

2. Total water = 2 litres

Water used for first plant = $\frac{1}{3}$ of 2 litre

$= \frac{2}{3}$ litre

Water used for second plant = $\frac{1}{4}\times2$ litre

$= \frac{2}{4}=\frac{1}{2}$ litre

Water used for third plant = $2-\left(\frac{2}{3}+\frac{1}{2}\right)$litre

$= 2-\left(\frac{4+3}{6}\right)$ litre

$= 2-\frac{7}{6}$ litre

$= \frac{6\times2-7}{6}$ litre

$= \frac{12-7}{6}$ litre $= \frac{5}{6}$ litre

Water left : None

Hands on Activity : **[Page No. 64]**

Do it Yourself

CHAPTER-8

Factors and Multiples

Rapid Refresh 1 **[Page No. 66]**

1. Factors of 18

$18 \div 1 = 18$

$18 \div 2 = 9$

$18 \div 3 = 6$

$18 \div 6 = 3$

$18 \div 9 = 2$

$18 \div 18 = 1$

Factors of 18 are 1, 2, 3, 6, 9, 18

2. Factors of 36

$36 \div 1 = 36$ $36 \div 9 = 4$

$36 \div 2 = 18$ $36 \div 12 = 3$

$36 \div 3 = 12$ $36 \div 18 = 2$

$36 \div 4 = 9$ $36 \div 36 = 1$

$36 \div 6 = 6$

So factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36

3. Factors of 45

$45 \div 1 = 45$ $45 \div 9 = 5$

$45 \div 3 = 15$ $45 \div 15 = 3$

$45 \div 5 = 9$ $45 \div 45 = 1$

Factors of 45 are : 1, 3, 5, 9, 15, 45

4. Factors of 28

$28 \div 1 = 28$ $28 \div 7 = 4$

$28 \div 2 = 14$ $28 \div 14 = 2$

$28 \div 4 = 7$ $28 \div 28 = 1$

$\therefore$ Factors of 28 are : 1, 2, 4, 7, 14, 28

5. Factors of 60

$60 \div 1 = 60$ $60 \div 10 = 6$

$60 \div 2 = 30$ $60 \div 12 = 5$

$60 \div 3 = 20$ $60 \div 15 = 4$

$60 \div 4 = 15$ $60 \div 20 = 3$

$60 \div 5 = 12$ $60 \div 30 = 2$

$60 \div 6 = 10$ $60 \div 60 = 1$

Factors of 60 are : 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

6. Factors of 30 are 2, 5, 15

7. Factors of 48.

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

$48 \div 2 = 24$ $48 \div 12 = 4$

$48 \div 3 = 16$ $48 \div 16 = 3$

$48 \div 4 = 12$ $48 \div 24 = 2$

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

Factors of 48 are : 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

8. Factors of

18 → 1, 2, 3, 6, 9, 18

24 → 1, 2, 3, 4, 6, 8, 12, 24

Common factor of 18 and 24 are : 1,2,3,6

9. Factors of 50 → 1, 2, 5, 10, 25, 50

Factor of 100 → 1, 2, 4, 5, 10, 20, 25, 50, 100

Common factor of 50 and 100 → 1, 2, 5, 10, 25, 50

Rapid Refresh-2 **[Page No. 67]**

1. 7, 14, 21, 28, 35

2. 8, 16, 24, 32, 40, 48

3. 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

4. (a) Yes (b) No

(c) Yes (d) Yes

5. (a) 15 is the multiple of both 3 and 5

(b) 20 is the multiple of 5 but not of 3.

(c) 30 is the multiple of both 3 and 5

(d) 45 is the multiple of both 3 and 5

6. 42

7. 6, 12, 18

8. Yes, 18 and 45 are multiples of 9.

Rapid Refresh 3 **[Page No. 69]**

1. Factors of 24 : 1, 2, 3, 4, 6, 8, (12), 24

Factors of 36 : 1, 2, 3, 4, 6, 9, (12), 18, 36

H.C.F. of 24 and 36 → 12

(b) Factors of 45 → 1,3,5,9,15, 45

Factor of 60 → 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60,

H.C.F. of 45 and 60 → 15

2. (a) Multiple of 6 → 6, 12, 18, 24, 30

Multiple of 9 → 9, 18, 27, 36

L.C.M. of 6 and 9 → 18

(b) Multiple of 8 → 8, 16, 24, 32, ...

Multiple of 12 → 12, 24, 36.....

L.C.M. of 8 and 12 → 24

3. (a) Prime Factorization of 50 → 2×5^2

Prime Factorization of 75 → $3 \times 5 \times 5$

$= 3 \times 5^2$

2	5 0
5	2 5
5	5
	1

3	7 5
5	2 5
5	5
	1

H.C.F. of 50 and 75 → $5^2 = 25$

(b) P.F. of 36 → $2^2 \times 3^2$

P.F. of 54 → 2×3^3

2	3 6
2	1 8
3	9
3	3
	1

2	5 4
3	2 7
3	9
3	3
	1

H.C.F. of 36 and 54 → 2×3^2

→18

4. (a) P.F of 15 → 3×5

P.F. of 20 = $2^2 \times 5$

L.C.M. of 15 and 20 → $3 \times 2^2 \times 5$

= 60

(b) P.F. of 14 → 2×7

P.F. of 4 → $2 \times 2 = 2^2$

L.C.M. of 14 and 4 → $2^2 \times 7$

= 28

5. (a) P.F. of 18 → 2×3^2

P.F. of 24 → $2^3 \times 3$

H.C.F. of 18 asnd 24 → $2 \times 3 = 6$

L.C.M. of 18 and 24 → $2^3 \times 3^2$

= 72

(b) P.F. of 16 → 2^4

P.F. of 40 → $2^3 \times 5$

H.C.F. of 16 and 40 → $2^3 = 8$

L.C.M. of 16 and 40 → $2^4 \times 5 = 80$

6. H.C.F. of 42 and 56

P.F. of 42 → $2 \times 3 \times 7$

P.F. of 56 → $2^3 \times 7$

HCF of 42 and 56 → $2 \times 7 = 14$

Hence largest number of marbles each group can have = 14

7. L.C.M of 20, 30

P.F. of 20 → $2 \times 2 \times 5 = 2^2 \times 5$

P.F. of 30 → $2 \times 3 \times 5 = 2 \times 3 \times 5$

L.C.M. of 20 and 30 → $2^2 \times 3 \times 5$

= 60 sec = 1 minute

Hence They will blink together at 9 : 01 AM

8. HCF of 84 and 108

$$84\overline{)108}(1$$
$$-84$$
$$24\overline{)84}(3$$
$$-72$$
$$12\overline{)24}(2$$
$$-24$$
$$0$$

HCF of 84 and 108 is 12 Ans.

LCM of 84, 108

84 → $2 \times 2 \times 3 \times 7 = 2^2 \times 3 \times 7$

108 → $2 \times 2 \times 3 \times 3 \times 3 \rightarrow 2^2 \times 3^2$

LCM of 84 and 108 → $2^2 \times 3^3 \times 7$

= 756

2	8 4
2	4 2
3	2 1
7	7
	1

2	108
2	54
3	27
3	9
3	3
	1

Reflect your skills : **[Page No. 69]**

1. (a) 42

42 ÷ 1 = 42 42 ÷ 7 = 6

42 ÷ 2 = 21 42 ÷ 14 = 3

42 ÷ 3 = 14 42 ÷ 21 = 2

42 ÷ 6 = 7 42 ÷ 42 = 1

42 → 1, 2, 3, 6, 7, 14, 21, 42

(b) 52

52 ÷ 1 = 52 52 ÷ 26 = 2

52 ÷ 2 = 26 52 ÷ 52 = 1

52 ÷ 4 = 13

$52 \div 13 = 4$

Factors of $52 \rightarrow 1, 2, 4, 13, 26, 52$

(c) 60

$60 \div 1 = 60$ $60 \div 6 = 10$

$60 \div 2 = 30$ $60 \div 10 = 6$

$60 \div 3 = 20$ $60 \div 12 = 5$

$60 \div 4 = 15$ $60 \div 15 = 4$

$60 \div 5 = 12$ $60 \div 20 = 3$

$60 \div 30 = 2$

$60 \div 60 = 1$

Factors of $60 \rightarrow 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60$

2. 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99

3. (a) 29 is prime

(b) 51 is not prime

(c) 47 is prime

4. (a)

2	12
2	6
3	3
	1

3	15
5	5
	1

P.F. of $12 \rightarrow 2 \times 2 \times 3 = 2^2 \times 3$

P.F. of $15 \rightarrow 3 \times 5$

L.C.M. of 12 and $15 \rightarrow 2^2 \times 3 \times 5 = 60$

(b)

2	18
3	9
3	3
	1

2	24
2	12
2	6
3	3
	1

P.F. of $18 \rightarrow 2 \times 3 \times 3 = 2 \times 3^2$

P.F. of $24 \rightarrow 2 \times 2 \times 2 \times 3 = 2^3 \times 3$

L.C.M. of 18 and $24 \rightarrow 2^3 \times 3^2$

$= 72$

5.

2	2 8
2	1 4
7	7
	1

2	42
3	21
7	7
	1

$28 \rightarrow 2 \times 2 \times 7 = 2^2 \times 7$

$42 \rightarrow 2 \times 3 \times 7$

H.C.F. of 28 and $42 \rightarrow 2 \times 7 = 14$

6.

2	8
2	4
2	2
	1

2	12
2	6
3	3
	1

$8 \rightarrow 2 \times 2 \times 2 = 2^3$

$12 \rightarrow 2 \times 2 \times 3 = 2^2 \times 3$

L.C.M. of 8 and $12 \rightarrow 2^3 \times 3 = 24$

7. (a) PF of $45 \rightarrow 3 \times 3 \times 5$

3	45
3	15
5	5
	1

(b) P.F. of 84

2	84
2	42
3	21
7	7
	1

$= 2 \times 2 \times 3 \times 7$

8. (a) Multiple of $6 \rightarrow 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 102, 108, 114, 120, 124, 128, 132.$

So, 132, is the multiple of 6.

(b) 55 is not the multiple of 6

(c) 108 is the multiple of 6

9. Factors of 56

$56 \div 1 = 56$ $56 \div 8 = 7$

56 ÷ 2 = 28 56 ÷ 14 = 4

56 ÷ 4 = 14 56 ÷ 28 = 2

56 ÷ 7 = 8 56 ÷ 56 = 1

Factors of 56 → 1, 2, 4, 7, 8, 14, 28, 56

So Greatest Prime factor of 56 is 7

(b) 90

90 ÷ 1 = 90 90 ÷ 10 = 9

90 ÷ 2 = 45 90 ÷ 15 = 6

90 ÷ 3 = 30 90 ÷ 18 = 5

90 ÷ 5 = 18 90 ÷ 30 = 3

90 ÷ 6 = 15 90 ÷ 45 = 2

90 ÷ 9 = 10 90 ÷ 90 = 1

greatest prime factor of 90 is → 5

10. Smallest composite number = 4

Puzzle Time : **Page No. 70**

1. Multiple of 3 = 3, 6, 9, 15

Multiple of 5 = 5, 10, 15

Hence, the number is 15. It is divisible by both 3 and 15.

2. 13, 15, 17, 19, 29, 40, 51

3.

3	15
5	5
	1

2	24
2	12
2	6
3	3
	1

2	90
3	45
3	15
5	5
	1

15 = 3 × 5

24 = 2 × 2 × 2 × 3 = $2^3 \times 3$

90 = 2 × 3 × 3 × 5 = 2 × 3^2 × 5

H.C.F. of 15, 24, 90 → 3

Real life connection : **[Page No. 70]**

1.

2	12, 18
2	6, 9
3	3, 9
3	1, 3
	1, 1

L.C.M. of 12 and 18 = 2 × 2 × 3 × 3

= 36 minutes

They will arrive at 10 : 36 AM again

2. No. of biscuit in box = 20 biscuits

No. of boxes = 55 boxes

Total biscuits = 5 × 20 = 100 biscuits

Yes this number is divisible by 5 and 10.

3. Factors of 84

84 ÷ 1 = 84 84 ÷ 14 = 6

84 ÷ 2 = 42 84 ÷ 21 = 4

84 ÷ 3 = 28 84 ÷ 28 = 3

84 ÷ 4 = 21 84 ÷ 42 = 2

84 ÷ 6 = 14 84 ÷ 84 = 1

84 ÷ 7 = 12

84 ÷ 12 = 7

Maximum number of friend can be 12 and each friend can get 7 chocolates

Hands on Activity : **[Page No. 70]**

Do It Yourself

CHAPTER-9

Geometry

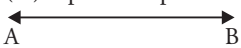
Rapid Refresh 1 **[Page No. 72]**

1. Point P

2. (i) Point of chalk on blackboard

(ii) Tip of pen

(iii) Tip of compass

3. 

4. Line do not have fixed length. It can be extended in both of the direction

Line segment have fixed length. It can not

be extended A $\overline{AB}$ B

5. C D

6. (i) Ruler

(ii) Side of Table

7. E F

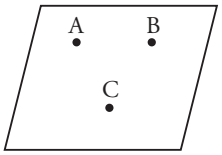
8. A ray has only one endpoint.

9. A line can be extend in both of the direction while a ray can be extend in only are direction.

10. (i) Surface of the table

(ii) Black board surface

11.



12. Yes, A line and a point both can be on the same plane.

Rapid Refresh 2 **[Page No. 75]**

1. Ans. (a) True (b) False

(c) False (d) True

2. (a) Right Angle

(b) Acute angle

(c) Straight angle

(d) Obtuse angle

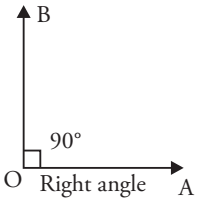
3. (a) 90°

(b) acute

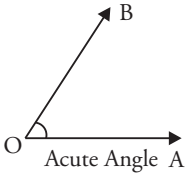
(c) obtuse

(d) 180°

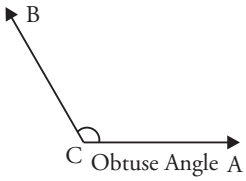
4. (a)



(b)



(c)

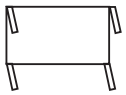


5. (a) acute angle

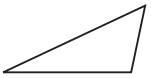
(b) Right angle

(c) obtuse angle

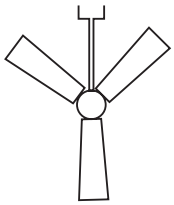
6. (a) Corner of table



(b) Tip of a paper fold



(c) Angle between the blades of fan



Rapid Refresh -3

1. (a) False

(b) True

(c) True

(d) False

2. (a) Pentagon

(b) Octagon

(c) Straight

(d) Square

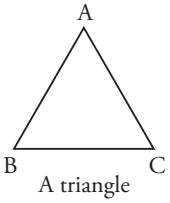
3. (a) Hexagon

(b) triangle

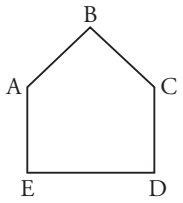
(c) Quadrilateral

(d) Pentagon

4. (a)

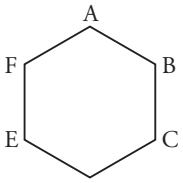


(b)



A Pentagon

(c)



A Hexagon

5. (a) Tissue paper stand
(b) Surface of Book
(c) Shape of hut
(d) shape of honeycomb

6. It will have 8 vertices

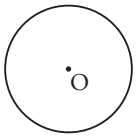
Rapid Refresh 3 **[Page No. 79]**

1. (a) circumference
(b) radius
(c) diameter

2. (a) false
(b) True
(c) False

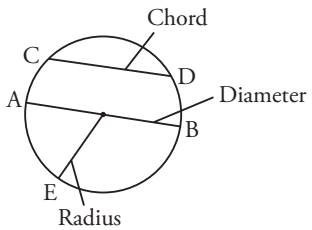
3. (a) Diameter = 10 cm
Radius = D/2 = 10 cm/2 = 5 cm
(b) Radius = 7 cm
Diameter = 2 × R = 2 × 7 cm = 14 cm
(c) Radius = 5 cm
Circumference = $2\pi r$
= 2 × 3.14 × 5 cm
= 31.4 cm

4. (a)

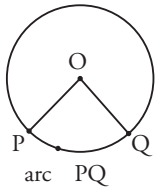


Circle with centre O

(b)



(c)



5. (a) A circular watch, A plate
(b) Protactor in geometery box
(c) A Mandala art on the wall

Reflect your skills : **[Page No. 80]**

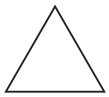
1. Line segment
2. Line
3. Ray
4. Three
5. Right Angle
6. Acute angle
7. Obtuse angle
8. diameter
9. Radius
10. Vertex

Puzzle time : **[Page No. 80]**

1. Right angle, obtuse angle

2. 90° (Right angle, The angle will be larger than at 3 : 00)

3. We can draw three straight lines to connect all points.



If we add another point, we can connect all these point by six lines.

Real life connection **[Page No. 8]**

1. radius, circumference

2. Acute angle, Right angle

Hands-On Activity **[Page No. 81]**

Do it yourself

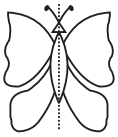
CHAPTER-10
Symmetry Patterns and Coding-Decoding

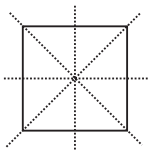
Rapid Refresh 1 **[Page No. 83]**

1. (a) True (b) False
(c) True (d) True

2. (a) Symmetry
(b) axis
(c) horizontal

3. (a) Vertical (b) Vertical
(c) horizontal vertical and diagonal
(d) Infinite lines of symmetry

4. (a) 

(b) 

(c) 

5. (a) Do it yourself

(b) 

(c) 

6. Infinity

Rapid Refresh : 2 **[Page No. 86]**

1. (a) 15 (b) I

2. (a) 19 - 21 - 14
(b) 13 - 16

3. (a) P-I-G
(b) C-A-R

4. (a) R
(b) 32

5. (a) False
(b) True
(c) False
(d) True

6. (a) mistabe is 18
correction is 20
(b) mistabe is H
Correction is G.

7. 12 -5-1-6

Reflect your skills : **[Page No. 87]**

1. 2 line of symmetry 1 triangle

2. It will look same because mirror show leteral reflection in which right side appear left in the mirror while left side appear right in the mirror. Word MOM apear same in the mirror.

3. 64

4. EPH

5. There will be no change in the reflection

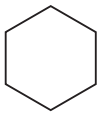
6. Circle, 4 shapes are needed to complete on cycle

7. Hexagon

8. The hexagon will have six lines of symmetry

Puzzle Time : **[Page No. 87]**

1. The reflection in the mirror will be WOW. Yes, it will look same

2. 

3. DEF

Real life connection : **[Page No. 87]**

1. YOT

2. mirror symetry

Hands on Activity : **[Page No. 88]**

Do it yourself

CHAPTER-11
Measurement

Rapid Refresh 1 **[Page No. 91]**

1. (a) 7 km to m

1 km = 1000 m

7 km = 7 × 1000 m

= 7000 m

(b) 550 cm to m

$1 \text{ cm} = \frac{1}{100} \text{m}$

$550 \text{ m} = \frac{550}{100} \text{m}$

= 5.5 m

(c) 3.5 m to mm

1m = 1000 mm

3.5 m = 3.5 × 1000 mm

= 3500 mm

2. (a) 5 kilogram to grams

1 kg = 1000 g

5 kg = 5 × 1000 g

= 5000 g

(b) 2,750 grams to kilograms

1 grams = $\frac{1}{1000}$ kilogram

2750 grams = $\frac{2750}{1000}$ Kilograms

= 2.750 Kilograms

(c) 1500 milligrams to grams

1 milligrams = $\frac{1}{1000}$ grams

1500 milligrams = $\frac{1500}{1000}$ grams

= 1.5 grams

3. (a) 4 litres to millilitres

1 litre = 1000 millilitres

4 litre = 4 × 1000 mL

= 4000 ml

(b) 8500 mL to l

1 mL = $\frac{1}{1000} l$

8500 mL = $\frac{8500}{1000} l$

= 8.500 l

(c) 10 kl to l

1 kl = 1000 l

10 kl = 10 × 1000 l

= 10000 l

4. (a) 1000

(b) 1000

(c) 1000

5. (a) False

(b) True

(c) True

(d) True

6. (a) 1 kg = 1000 g

3.2 kg = 3.2 × 1000 g

= 3200 g

(b) 1 militre = $\frac{1}{1000}$ litre

4800 ml = $\frac{4800}{1000} l$

= 4.8 l

(c) 1 km = 1000 m

6.5 km = 6.5 × 1000 m

= 6500 m

7. Water tank hold water = 5 litre

= 5000 mL

Another tank hold water = 4500 mL

First Tank hold more water

5000 mL

− 4500 mL

500 mL

First tank hold more water by 500 mL

Rapid Refresh 2 **[Page No. 93]**

1. (a) 3 m 45 cm = 3 × 100 cm + 45 cm

= 345 cm

5 m 80 cm = 5 × 100 cm + 80 cm

= 580 cm

345 cm

+ 580 cm

925 cm = 9m 25 cm

(b) 2l 350 mL = 2000 mL + 350 ml

= 2350 mL

1l 750 mL = 1000 mL + 750 mL

= 1750 mL

2350 mL

+ 1750 mL

4100 mL = 4 l 100 mL

(c) 4 kg 200 gm = 4000 g + 200 g = 4200 g

3 kg 800 gm = 3000 g + 800 g = + 3800g

8000 g

8000 g = 8 kg

2. (a) 1 m 50 cm = 100 cm + 50 cm = 150 cm

4 m 30 cm = 400 cm + 30 cm = 430 cm

430 cm

− 150 cm

280 cm = 2 m 80 cm

(b) $6l\,300\text{ mL} = 6000\text{ mL} + 300\text{ mL} = 6300\text{ mL}$
$2l\,150\text{ mL} = 2000\text{ mL} + 150\text{ mL} = 2150\text{ mL}$
4150 mL
$= 4l\,150\text{ mL}$

(c) 2 kg 2000 g
$-$ 500 g
1500 g = 1 kg 500 g

3. Weight of rice bage 2 500
Weight of flour bag + 3 750
Total weight of both bag 6 250
Hence the total weight of both the bag is 6 kg 250 g

4. 1750 mL

$1\text{ mL} = \frac{1}{1000} l$

$1750\text{ mL} = \frac{1750}{1000} l$

$= 1l\,750\text{ mL}$

5. 2 m 35 cm = 200 cm + 35 cm = 235 cm
3 m 90 cm = 300 cm + 90 cm = +390 cm
625 cm

$1\text{ cm} = \frac{1}{100} m$

$625\text{ cm} = \frac{625}{100} m$

$= 6\text{ m } 25\text{ cm}$

6. Jug hold water 5 600
Used water $-$ 3 250
Water left in the jug 2 350
Hence 2l 350 mL water is left in the jug.

7. Length of Ist rope 3 m 80 cm
Length of IInd rope = 5 m 40 cm

m	cm
5	40
$-$ 3	80
1	60

Hence 1 m 60 cm length is more of the Ist rope then 2nd rope

Rapid Refresh-3 **[Page No. 95]**

1. Johny walks to school = 4 km
He aready walked = 2.5 km
He still have to walk = 4 .0 km
$-$ 2. 5 km
1 . 5 km

2. Weight of sugar bag = 2 kg = 2000 g
Use sugar weight = 750g
Left sugar weight = 2000 g
$-$ 750 g
1250 g = 1 kg 250 g
Hence 1 kg 250 g sugar is left

3. Weight of water bottle = 2l
Water left = 1.2 l
Used water = 2. 0 l
$-$1. 2 l
0. 8l = 800 mL
Hence 800 mL water is used from the bottle

4. A football match start at 3 : 00 PM
Match last for = 90 min = 1 hr 30 min
Time at what match ends = 3 : 00
+ 1 : 30
4 : 30
Hence match will ends at 4 : 30 PM

5. (a) 1000
(b) 1000
(c) 1000

6. Total juice = 3 litre = 3000 mL
each guest drink juice = 250 mL
no of guest can serve

$$250\overline{)3000}\,(12$$
$$-250$$
$$500$$
$$-500$$
$$0$$

Hence 12 guest can be served.

Reflect your skills : **[Page No. : 96]**

1. (a) First bag is heavier
4 . 7 8 0 kg
$-$ 3 . 5 6 0 kg
1 . 2 2 0 kg
First bag is heavier by 1 .220 kg.

2. 12. 35 meter = 12 . 35 × 100 cm
= 1235 cm
Add 1235 cm and 6450 cm

$$\begin{array}{r} 1\,2\,3\,5 \text{ cm} \\ +\,6\,4\,5\,0 \text{ cm} \\ \hline 7\,6\,8\,5 \text{ cm} \end{array}$$

$$1 \text{ cm} = \frac{1}{100} \text{ m}$$

$$7685 \text{ cm} = \frac{7685}{100} \text{ m} = 76.85\text{m}$$

3. 1 kg = 1000 g

(a) 5 kg = 5 × 1000 g

= 5000 g

Adding remaining grams = 5000 g

+ 750 g

= 5750 g

4. Do yourself

5. length of Ribbon = 3.5 m

Cut length of ribbon = 1500 mm

$$1 \text{ mm} = \frac{1}{1000} \text{ m}$$

$$1500 \text{ mm} = \frac{1500}{1000}\text{m} = 1.5 \text{ m}$$

Remaining length of ribbon

$$\begin{array}{r} = 3.5 \text{ m} \\ -\,1.5 \text{ m} \\ \hline 2.0 \text{ m} \end{array}$$

6. (a) distances are = 4300 m

and 3.65 km = 3.65 × 1000 m

= 3650 m

Total distances run are

$$\begin{array}{r} = 4300 \text{ m} \\ +\,3650 \text{ m} \\ \hline 7950 \text{ m} \end{array}$$

7. (a) 1 grams = $\frac{1}{1000}$kg

8345 grams = $\frac{8345}{1000}$ kg = 8.345 kg

Total weight = 45.78 kg

$$\begin{array}{r} +\,8.345 \text{ kg} \\ \hline 54.125 \text{ kg} \end{array}$$

8. (a) 1000 m = 1 kg

$$1 \text{ m} = \frac{1}{1000}\text{km}$$

$$320000 = \frac{320000}{1000}\text{km}$$

= 320 km

(b) Total distance in km

$$\begin{array}{r} = 256 \text{ km} \\ +\,320 \text{ km} \\ \hline 576 \text{ km} \end{array}$$

9. (a) 1 kg = 1000 g

14.2 kg = 14200 g

(b)

$$\begin{array}{r} 14200 \text{ g} \\ -\,7500 \text{ g} \\ \hline 6700 \text{ g} \end{array}$$

10. (a) 1 mL = $\frac{1}{1000}l$

$$7450 \text{ mL} = \frac{7450}{1000}l$$

$$= 7.450\ l$$

(b)

$$\begin{array}{r} 12.40\ l \\ -\ 8.75\ l \\ \hline 3.65\ l \end{array}$$

Puzzle time : **[Page No. : 97]**

1. (a) Ria has orange juice = 2 litre

Ria has apple juice = 1.25 litre

Ria has mango juice = 850 millilitre

$$1 \text{ mL} = \frac{1}{1000}l$$

$$850 \text{ mL} = \frac{850}{1000}l = 0.85\ l$$

So Ria had total juice

$$\begin{array}{r} 2.000\ l \\ 1.250\ l \\ +\,0.850\ l \\ \hline 4.100\ l \end{array}$$

Hence Ria had 4.1 l of juice in total

(b) She add water = 350 = $\frac{350}{1000} l = 0.350l$

now she had liquid =

$$\begin{array}{r} 4.100\ l \\ +\ 0.350\ l \\ \hline 4.450\ l \end{array}$$

Hence, she had 4.45 litre of mixture.

2. (a) length of road = 7.5 km = 7.5 ×1000m

= 7500 m

Traffic cones are placed at the distance of = 250 m

No of cones placed = $\frac{7500m}{250m}$

$$= 250\overline{)\,7500\,(\,30}$$
$$\underline{-750}$$
$$\underline{-0}$$
$$0$$

= 30

Hence, 30 cones will be placed on the road.

(b) No of placed cones = 20

Left cones = 30 – 20 = 10

Real life connection : **[Page No. 97]**

1. (a) leena has paint = 1.5 l

She use paint = 875 mL = $\frac{875}{1000} l$

$= 0.875l$

$$\begin{array}{r} \text{left paint} = 1.500\ l \\ -\ 0.875\ l \\ \hline 0.625\ l \end{array}$$

She has left with paint = 0.625 l after the project.

(b) She need some extra paint = 500 mL = $\frac{500}{100} l$ = 0.5 l

then total paint she need to complete the project = 0.875 l

$$\begin{array}{r} +\ 0.500l \\ \hline 1.375\ l \end{array}$$

Hence she will use total paint = 1.375l

2. (a) Total water in Pool = 2,500l

Water evaporates from the pool every minute = 0.65 l

Water lost in 1 hour

= 0.65 l × 60 min

= 39.00l = 39l

(b) Water lost in 3 hour = 39 × 3 = 117l

Water left in the pool after 3 hours of evaporation = 2500 l

$$\begin{array}{r} -\ 117\ l \\ \hline 2383\ l \end{array}$$

Hands on Activity : **[Page No. : 97]**

Do it yourself

CHAPTER-12
Money

Rapid Refresh 1 **[Page No. 100]**

1. (a) ₹ 1 ₹ = 100 P

₹ 4.75 = 4.75 × 100 P

= 475 P

(b) ₹ 1 = 100 P

₹ 6.50 = 6.50 × 100 P

= 650 P

(c) ₹ 1 = 100 P

₹ 12.10 = 12.10 × 100 P

= 1210 P

(d) ₹ 1 = 100 P

₹ 5.25 = 5.25 × 100

= 525 P

(e) ₹ 1 = 100 P

₹ 9.40 = 9.40 × 100 P

= 940 P

(f) ₹ 1 = 100 P

₹ 18.85 = 18.85 × 100 P

= 1885 P

2. (a) 100 P = ₹ 1

$1P = ₹\frac{1}{100}$

$600\ P = ₹\frac{600}{100} = ₹\ 6$

(b) $1\ P = ₹\frac{1}{100}$

$850\ P = ₹\frac{850}{100}$

= ₹ 8.5

(c) $1P = ₹\frac{1}{100}$

$1500\ P = ₹\frac{1500}{100}$

= ₹ 15

3. (a) 100

(b) 10.75

(c) 6.25

(d) 1

4. (a) True

(b) True

(c) True

(d) False

5. (a) ₹ 1 = 100 P

₹ 750 = 750 × 100

= 75000 P

(b) $1P = ₹\frac{1}{100}$

$180000\ P = ₹\frac{180000}{100}$

= ₹ 1800

(c) ₹1 = 100 P

₹ 1,200.75= 1,200.75 × 100

= 1,20,075 P

6. You have money = ₹ 55.40

= ₹ 55 and 40 P

Spend money = ₹35.90 = ₹35 and 90P

Money left = ₹ P

₹	P
55	40
– 36	90
18	50

Hend ₹18.50 P will be left

Rapid Refresh : 2 **[Page No. : 103]**

1. (a) ₹ 6.50 + ₹ 8.75 = ₹ 15.25

(b) ₹ 12.40 + ₹ 5.60 = ₹ 18.00

2. (a) ₹ 15.20 – ₹ 9.80 = ₹ 5.40

(b) ₹ 20.75 – ₹ 12.35 = ₹ 8.40

3. (a) ₹ 7.80

\+ × 4

₹ 31.20

(b) ₹ 12.25

\+ × 2

₹ 24.50

4. (a)

```
      6
  5 ) 30 (
     –30
      0
```

Each person will get ₹ 6

(b)

```
     16.25
  3 )48.75(
    – 3
     18
    –18
      07
      –6
      15
      15
       ×
```

Each friend will get ₹ 16.25

5. (a) 1

(b) 1575

(c) 2

6. (a) True

(b) False

(c) False

7. Cost of each toy = ₹ 8.45

Cost of 3 toy = ₹ 8.45 × 3

= ₹ 25.35

Reflect your skills : **[Page No. 103]**

1. Cost of notebook = ₹ 75

= +₹ 25

Total money Ravi spend

= ₹ 100

2. Cost of 1 kg of apples = ₹ 120
Cost of 3 kg of apples = ₹ 120 × 3
= ₹ 360

3. Cost of 1 kg mangoes = ₹ 60
Cost of 2.5 kg mangoes = ₹ 60 × 2.5
= ₹ 150.0

4. $1P = ₹\frac{1}{100}$

$4750P = ₹\frac{4750}{100}$

= ₹ 47.50

5. Cost of Pencil box = ₹ 125
Cost of a ruler = ₹ 15
Cost of an eraser = ₹ 10
Cost of 3 eraser = ₹ 10 × 3
= ₹ 30
Total cost of items = ₹ 125 + ₹ 15 + ₹30
= ₹ 170

6. Cost of 1 Pencil = ₹ 12
Total money to buy pencil = ₹ 240
No of pencil we can buy = ₹ 240 ÷12
= 20

```
    20
12 )240(
  - 24
   00
  - 00
    0
```

Hence 20 Pencils can be purchased.

7. Total Bill of grocery store = ₹ 675
Paid money = ₹ 1000
Money we get back = ₹ 1000

```
  - ₹ 675
  ₹ 325
```

8. Cost of 1 litre milk = ₹ 45
Cost of 4.5 litre of milk = ₹ 45 × 4.5
= ₹ 202.50

```
   4 5
 × 4.5
 225
180×
202.5
```

9. Cost of 1 book = ₹ 150
Cost of 2 books = ₹ 150 × 2 = ₹ 300
Cost of a notebook = ₹ 80
Total cost of 2 books and a notebook
= ₹ 300 + ₹ 80
= ₹ 380
Customer gave money = ₹ 500
Money he got back = ₹ 500 – ₹ 380
= ₹ 120

10. Total Money Rohan had = ₹ 800
Money he spent on bag = ₹ 320
Money he spent on pair of shoes = ₹ 275
Total money he spent = ₹ 320 + ₹ 275
= ₹ 595
Money left with him = ₹ 800

```
  - ₹ 595
  ₹ 205
```

Hence Rohan is left with ₹ 205

Puzzle time : **[Page No. 104]**

1. No of days in one week = ₹ 50
He put everyday in his piggy bank = ₹ 50
he out money in 1 week = ₹ 50 × 7
= ₹ 350
But he found money = ₹ 450
Extra money he already had in his piggy bank = ₹ 450

```
  – ₹ 350
  ₹100
```

Hence boy already has ₹ 100 in his piggy bank.

2. Money had in the walled = ₹ 500
Money spend = ₹ 320 + ₹ 115
= ₹ 435
Money left= ₹500 – ₹ 435
= ₹65
But Money left in the wallet = ₹ 80
How much money disappeared from the wallet = 80 – 65 = 15
Hence ₹ 15 has disappeared from the wallet

3. Sarah had money = ₹ 600

She spend money on jackpot = $\frac{1}{2}$ of ₹ 600

$= \frac{1}{2} \times$ ₹ 600 = ₹ 300

let money = ₹ 600 – ₹ 300

= ₹ 300

She spend money on Toy

$= \frac{1}{3}$ of ₹ 300

$= \frac{1}{3} \times$ ₹ 300 = ₹ 100

Money she left with = ₹ 300 – ₹ 100

= ₹ 200

Real life connection : [Page No. 104]

1. (a) Meena's mother gave her money

= ₹ 2000

Money she spent on shopping

= ₹ 600
₹ 350
₹ 150
+ ₹ 175
₹ 1275

Money left with her after shopping

= ₹ 2000
= – ₹ 1275
₹ 725

Money left with Meena = ₹ 725

(b) If meena by bread costing = ₹ 30

Now she will have money = ₹ 725
– ₹ 30
₹ 695

Yes meena will have enough money and after buying bread she will left with ₹ 695.

2. (a) Family had money = ₹ 10,000

Conversion rate = ₹ 80 = 1 USD

No of US Dollar they will get

= ₹ 10,000 ÷ ₹ 80

$$80\overline{)10000}\begin{array}{l}125\\ -80\\ \hline 200\\ -160\\ \hline 400\\ 400\\ \hline \times\end{array}$$

Hence They will buy 125 US Dollar

(b) If they spend $ 50 then remaining dollar

= $ 125 – $ 50

= $ 75

Money they are left with

= $ 75 × 80

= ₹ 6000

Hands on Activity : [Page No. 104]

Do it Yourself

CHAPTER-13
Time

Rapid Refresh : 1 [Page No. 107]

1. (a) 2 : 00 P.M.
(b) 10 : 00 P.M.
(c) 5 : 30 A.M.

2. (a) 14 : 00
(b) 09 : 30
(c) 23 : 00

3. (a) 01 : 30 P.M.
(b) 10 : 00 P.M.
(c) 07 : 15 A.M.

4. (a) Afternoon
(b) 09 : 00

5. (a) 3 minutes
(b) 40 seconds

6. 05 : 00 and 05 : 00 A.M.

Rapid Refresh-2 **[Page No. 109]**

1. (a) 1 minute = 60 second

6 minute = 6 × 60 second

= 360 second

(b) 1 hour = 60 minute

3 hour = 3 × 60 min

= 180 min

(c) 1 day = 24 hrs

4 day = 4 × 24 hrs

= 96 hrs

(d) 1 week = 7 days

5 week = 5 × 7 days

= 35 days

2. (a) $1 \text{ sec} = \frac{1}{60} \text{ min}$

$180 \text{ sec} = \frac{180}{60} \text{ min}$

= 3 min.

(b) $1 \text{ min.} = \frac{1}{60} \text{ hrs}$

$240 \text{ min.} = \frac{240}{60} \text{hrs}$

= 4 hrs

(c) $1 \text{ hr} = \frac{1}{24} \text{days}$

$72 \text{ hrs.} = \frac{72}{42} \text{days} = 3\text{days}$

(d) $1 \text{ day} = \frac{1}{7} \text{week}$

$28 \text{ days} = \frac{28}{7} \text{week} = 4 \text{ week}$

3. (a) 24

(b) 7

(c) 60

(d) 12

4. (a) True

(b) False

(c) False

(d) True

5. (a) 2 hrs 30 min= 2 × 60 min + 30 min

= (120 + 30) min

= 150 min

(b) 10 min 45 sec

= 10 × 60 sec + 45 sec.

= 600 sec + 45 sec.

= 645 sec.

(c) 5 days = 5 × 24 hrs

= 120 hrs

(d) 2 weeks = 2 × 7 × 24 hrs

= 14 × 24 hrs = 336 hrs.

6. A train take time to complete journey

= 5 hours 15 min.

= 5 × 60 min + 15 min

= (300 + 15) min

= 315 min

Rapid Refresh-3 **[Page No. 111]**

1. (a)

hrs	min
2	35
+ 1	40
3	75

3 m in 75 sec. = 3 min (60 + 15)sec

= 4 min 15 sec.

(b)

hrs	min
3	50
+ 2	15
5	65

5 hrs 65 min = 5 hrs + (60 + 5) min

= 6 hrs 5 min

(c)

hrs	min
1	45
+ 2	55
3	110

3 hrs 110 min = 3 hrs (60 + 50) min

= 4 hrs 50 min

(d)

hrs	min
4	10
+ 3	35
7	45

7 hrs 45 min

2. (a)

hrs	min
3	30
– 1	15
2	15

Ans is 2 hrs 15 min

(b)

hrs	min
5	10
– 2	20
2	50

Ans is 2 hrs 50 min

(c)

hrs	min
4	40
– 1	50
2	50

Ans is 2 hrs 50 min

(d)

hrs	min
6	30
– 3	25
3	5

Ans is 3 hrs 5 min

3. (a) True

(b) True

(c) True

4. (b)

hrs	min
3	45
+ 1	30
4	75

4 hrs 75 min = 4 hrs + (60 + 15) min
= 5 hrs 15 min

(c)

hrs	min
6	00
– 2	50
3	10

Ans is 3 hrs 10 min

5.

hrs	min
2	15
+ 1	55
3	70

3 hrs 70 min = 3 hrs (60 + 10) min
= 4 hrs 10 min

So the time I finished the game at 4 : 10 P.M.

Reflect your skills : **[Page No. 112]**

1. 3 hrs 25 min = 3 × 60 + 25 min
= 180 + 25 min
= 205 min

2.

hrs	min
3	45
+ 2	15
5	60

5 hrs 60 min = 5 hrs + 1 hrs
= 6 hrs

It means the time after 2 hrs and 15 minutes will be 6 : 00 P.M.

3. 2 days 5 hrs 45 min

$= 2 \times 24 + 5 \text{ hrs} + \frac{3}{4} \text{ hours}$

$= \left(48 + 5 + \frac{3}{4}\right) \text{ hours}$

= 53.75 hours

4. 22 : 30 + 6 hrs 40 min

hrs	min
22	30
+ 6	40
28	70

= 28 hrs 70 min
= 29 hrs 10 min
= 5 : 10 A.M.

5.

hrs	min
13	20
–5	15
8	5

Ans is 8 hrs 5 min

6.

hrs	min
11	50
–9	20
2	30

Hence the class last for 2 hrs 30 min

7.

hrs	min
7	10
– 5	30
1	40

Hence the show last for 1 hrs 40 min

8. 135 min = 120 min 15 min
= 2 hrs 15 min

9. Total sleep in a week
= 8 × 60 × 7
= 3360 minutes

10. The current time 6.50 P.M.
After one hours 40 min.
= 6 : 50 P.M. + 1 : 40
= 7 : 90 P.M.
= 8 : 30 P.M.

11. Time of flight = 16 : 45
Time to reach airport
= – 2 : 00
14 : 45
∴ The time should be 2 : 45 P.M.

12. Time is clock 10 : 15 A.M.
= 10 : 15
after 7 hours 30 min the time will be
= 10 : 15
+ 7 : 30
17 : 45
Hence the time will be 5 : 45 P.M.

13. Number of days in 120 hours

$$1 \text{ hour} = \frac{1}{24} \text{ days}$$

$$120 \text{ hours} = \frac{120}{24} \text{ days}$$

= 5 days
So There will be 5 days in 120 hours.

14. The time on the clock = 14 : 55
Time before 3 hrs 20 min = – 3 : 20
11 : 35
So the new time is 11 hrs 35 min.

15. 7 week and 3 days
= (7 × 7 + 3) days
= 52 days

Puzzle time : **[Page No. 113]**

1. It will take 15 minutes to reach minute hand to the number 12. The new time will be 9 : 00 A.M.

2. Race starts at 1 : 20 P.M.

(a) Friend Finish the race

hrs	min
13	20
2	35
+	25
15	80

Friends finish the race at 15 hrs 80 min
= 16 hrs 20 min
= 4 : 20 P.M.

(b) Friend took the time to finish the race

hrs	min
2	35
+	25
= 2 hrs 60	min

2 hrs 60 min = 2 + 1 hrs = 3 hrs.

3. The traveller starts first journey at
= 8 hrs 30 min

(a) he arrives third country

hrs	min
8	30
2	15
1	45
+ 3	00
14	90

he arive the third country at 14 hrs 90 min.

(b) The journey took total time

hrs	min
15 hrs	30 min
– 8 hrs	30 min
7 hrs	0 min

Real life connection : **[Page No. 113]**

1. The time I will finish getting ready

hrs	min
6	30
	45
+	15
6	90

The time will be 6 hrs 90 min

= 7 : 30 A.M.

(b) Total time from waking up to finish breakfast

7 hrs	30 min
– 6 hrs	30 min
1 hrs	

2. Cake will be ready to eat at = 4 : 15 P.M.

+ 1 hr 20 min

+ 30 min

hrs	min
16	15
1	20
+	30
17	65

The time will be 17 hrs 65 min = 18 hrs 5 min

= 6 : 05 P.M. Ans.

Hands On Activity : **[Page No. 113]**

Do It Yourself

CHAPTER-14
Perimeter and Area

Rapid Refresh : 1 **[Page No. 116]**

1. (a) Area of square = side × side

= 6 m × 6m

= 36 m^2

(b) Area of square = 12 cm × 12 cm

= 144 cm^2

2. (a) Area of rectangle = length × breadth

= 9 m × 3m

= 27 m^2

(b) Area of Rectangle = length × breadth

= 7 m × 5m

= 35 m^2

3. (a) Area of triangle = $\frac{1}{2} \times$ base × height

$= \frac{1}{2} \times 10 \text{ m} \times 6 \text{ m}$

= 30 m^2

(b) Area of triangle = $\frac{1}{2} \times$ base × height

$= \frac{1}{2} \times 5\text{m} \times 4^2 \text{ m}$

= 10 m^2

4. (a) Area of circle = $\pi \times r^2$

$= \frac{22}{7} \times 5\text{m} \times 5\text{m}$

$= \frac{550}{7} \text{m}^2$

= 78.571 m^2

(b) Area of circle = πr^2

$= \frac{22}{7} \times 6\text{m} \times 6\text{m}$

$= \frac{792}{7} \text{m}^2 = 113.142\text{m}^2$

5. (a) Side, side

(b) length, breadth

(c) 1/2

(d) π

6. (a) True

(b) False

(c) True

(d) False

7. Side of square floor = 8 m

Area of square floor = side × side

= 8 m × 8 m

= 64 m^2

Area of title = 1 m^2

Number of tiles we need

$= \frac{\text{Area of square floor}}{\text{Area of tile}} = \frac{64\text{m}^2}{1\text{ m}^2} = 64$

Hence we will need 64 tiles to tile a square floor.

Reflect your skills [Page No. 117]

1. (a) Perimeter of the Park
= 2 (length + breadth)
= 2(50 m + 20m)
= 140 m

(b) Area of the park = length × breadth
= 50 m × 20m
= 1000 m^2

2. (a) Perimeter of the garden
= 4 × side
= 4 × 15m
= 60 m

(b) Area of park if side is doubled
new side of the park = 15 m × 2 = 30m
Area = side × side
= 30 m × 30 m
= 900 m^2

3. Base of triangular piece of land = 14 m
height of triangular piece of land = 12 m

Area of the triangle = $\frac{1}{2} \times$ Base × height

$= \frac{1}{2} \times 14\ m \times 12m$

= 84 m^2

4. length of playground = 35m
width of playground = 25 m
length of fencing needed = Perimeter of the playground.
= 2(length + breadth)
= 2(35m + 25m)
= 2 × 60 m = 120m

5. length of hall = 15 m
breadth of hall = 10 m
Area of hall = length × breadth
= 15m × 10 m
= 150 m^2
Area of tile = 1 m^2

numbers of tile = $\frac{\text{Area of hall}}{\text{Area of tile}}$

$= \frac{150\ m^2}{1m^2} = 150$ tiles

Hence 150 tiles will be needed.

6. Diameter of circular fountain = 10 m

Radius of circular fountain = $\frac{\text{Diameter}}{2}$

$= \frac{10\ m}{2} = 5\ m$

Perimeter of fountain = $2\pi r = 2 \times 3.14 \times 5m$
= 31.4 m

7. Area of square floor = 64 sq. m = 8m ×8m
Hence side of the square = 8 m

8. (a) Area of field (Rectangular) = length × breadth
= 80 m × 40 m
= 3200 m^2

Area of triangular field

$= \frac{1}{2} \times \text{base} \times \text{height}$

$= \frac{1}{2} \times 60\ m \times 30\ m$

= 900 m^2

(b) Rectangular field has more area

9. Perimeter of pool= 200 m
length of pool = 70 m
width of pool = ?
Perimter = 2(length + breadth)
200 m = 2(70m + breadth)

70m + breadth = $\frac{200}{2} m = 100m$

breadth = 100 m – 70 m
= 30 m

10. (a)Perimeter of square = 48 m
Perimeter = 4 × side

side = $\frac{\text{Perimeter}}{4} = \frac{48m}{4}$

= 12 m

(b) Area of garden = side × side
= 12 m × 12 m
= 144 m^2

Puzzle time : **[Page No. 118]**

1. Perimeter of square garden = 4 × side

= 4 × 16m

= 64 m

Flower are planted at length of 2m

$$\text{no of flowers planted} = \frac{\text{Perimeter of garden}}{\text{distance b/w flower}}$$

$$= \frac{64\ \text{m}}{2\ \text{m}}$$

= 32 flower

2. length of Rectangle = 60 m

breadth of Rectangle = 40 m

Area of Rectangle = length × breadth

= 60 m × 40 m

= 2400 m^2

Area of pond = 400 m^2

Remaining area of land avaiable for forming = 2400 m^2 – 400 m^2 = 2000m^2

Area of each part when divided into two parts = $\frac{2000\ m^2}{2}$ = 1000 m^2

Real life Connection **[Page No. 118]**

1. Base of triangular flower bed = 12 m

height of triangular flower bed = 8 m

(a) Area of flower bed = 1/2 × base × height

$$= \frac{1}{2} \times 12\text{m} \times 8\text{m}$$

= 48 m^2

(b) Costing of grass seed = ₹ 50 per sq.m

Total cost = 48m × ₹ 50

= ₹ 2400

2. Side of square track = 20 m

(a) Total distance covered by the student

= 4 × side

= 4 × 20 m

= 80 m

(b) If the student cover 3 round (laps)

Total distance covered = 80 m × 3

= 240 m

Hands on Activity : **[Page No. 119]**

Do It Yourself.

CHAPTER-15
Data handling

Rapid Refresh **[Page No. 21]**

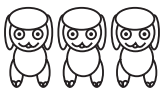
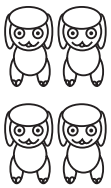
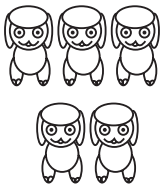
1. (a) Rohan read 8 books

(b) Priya read 6 books

(c) Neha read 14 books

(d) Neha read the most books

2.

Student	**Number of Pets**	**1 = 2 pet**
Raj		
Meera		
Adi		
Kavya		

Rapid Refresh 2 **[Page No. 123]**

Pets	**Tally Marks**	**Number of students**
Dog	𝍸 𝍸 𝍸 𝍸	20
Cat	𝍸 𝍸 𝍸 𝍸	20

Rabbit	𝍸 𝍸 𝍸 ||||	19
Birds	𝍸 𝍸 𝍸	15

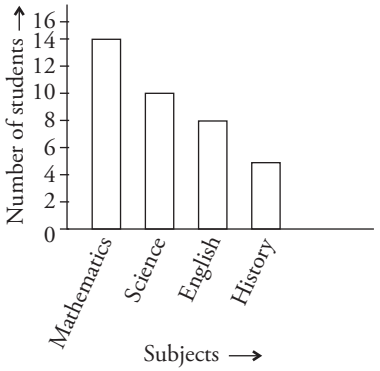
2. (a) Rohan read 7 books.
(b) Neha read the most books
(c) Rohan read the least books
(d) Total number of books read by students for this month are 49.

3. (a) False
(b) True
(c) True
(d) False

Rapid Refresh 3 **[Page No. 125]**

1. (a) Maximum number of cars were produced in 2024 = 700 cars
(b) Minimum number of cars were produced in 2022 = 300 cars
(c) 500 cars
(d) Total number of cars produced in these four years = 500 + 300 + 400 + 700
= 1900 cars

2.



3. (a) Categories
(b) Numerical value
(c) number of items

4. (a) False
(b) False
(c) True
(d) False

Reflect your skills : **[Page No. 126]**

1. (a) Student B has 4 pets
(b) Student C has least number of pets.
(c) Total number of pets = 8 + 4 + 2 + 10 = 24 pets.

2. (a) 8 blue marbles
(b) Yellow colour marble has the highest count.
(c) Total marbles = 11 + 8 + 17 + 23 = 59 marbles.

3. (a) 12 – 6 = 6 books
(b) 8 + 12 + 6 + 10 = 36 books
(c) Student (read the least number of books)

Puzzle time : **[Page No. 127]**

1. (a) Johnson family have 12 pets.
(b) Green and smith family has the least number of pets.
(c) 12 – 4 = 8 pets
(d) 8 pets

2. (a) 10 – 6 = 4 votes
(c) Total number of votes = 14 + 10 + 12 + 6 = 42 votes.
(c) 12 + 1 = 13 votes

Real life Connection. **[Page No. 128]**

1. (a) Total cupcakes sold = 10 + 15 + 12 +18
= 55 cupcakes
(b) Total cupcakes sold till friday = 55 + 25
= 80 cupcakes

2. (a) 11 children are playing soccer
(b) 7 + 3 = 10 children will be playing basketball.
(c) Total children playing all the games combined 11 + 7 + 14
= 32 children

Hands on Activity : [Page No. 128]

Do It Yourself.

❑❑

Math-5

CHAPTER-1
Revision

Rapid Refresh **[Page No. 5]**

1. (a) 64,506 (b) 49,822

2. (a) Two lakh Sixty five thousand three hundred forty one.

(b) Eighteen thousand six hundred seventy nine.

(c) Two lakh sixty seven thousand eight hundred ninety.

(c) Three lakh twenty five thousand one hundred seventy three.

3. (a) 25 (b) 37

(c) 19 (d) 47

4. 66640

5. 303378

6. (a) 45029; 45092; 45290; 50294; 386254

(b) 986325; 540226; 25400; 8932; 6680

7. Surbhi ran = 3450 m

Pihu ran = 3054 m

Surbhi ran more of → 3450 m

– 3054 m

396 m

8. 2, 13, 37

9. Water in two bottles = 350 ml + 1675 ml

= 2025 ml

Capacity of both bottles = 2 × 2 litre = 4 litre

= 4000 ml

Water needs to be added to fill both of the bottles = 4000 ml – 2025 ml

= 1975 ml

each bottal capacity is 1150 ml, 325 ml

10. 2 3 8 0 4 6 → 8 0 0 0

3 4 0 5 9 7 → 0

11. (a) 75893 → 70000 + 5000 + 800 + 90 + 3

(b) 20785 → 20000 + 0 + 700 + 80 + 5

(c) 389647 → 300000 + 80000 + 9000 + 600 + 40 + 7

(d) 450708 → 400000 + 50000 + 0 + 700 + 0 + 8

12. (a) 842567 (b) 960301

13. (a) 48, 96, 192 (b) 16, 19, 22

14. (a) $\frac{3}{16} + \frac{7}{16} = \frac{3+7}{16} = \frac{10}{16} = \frac{5}{8}$

(b) $\frac{9}{17} - \frac{4}{17} = \frac{9-4}{17} = \frac{5}{17}$

(c) $\frac{7}{9} + 1\frac{2}{9} + \frac{1}{9} = \frac{7}{9} + \frac{11}{9} + \frac{1}{9} = \frac{7+11+1}{9}$

$= \frac{19}{9}$

(d) $3\frac{1}{8} - 2\frac{3}{8} = \frac{25}{8} - \frac{19}{8} = \frac{25-19}{8} = \frac{6}{8}$

$= \frac{3}{4}$

15. LCM of 3, 4, 6, 18 →

2	3, 4, 6, 18
2	3, 2, 3, 9
3	3, 1, 3, 9
3	1, 1, 1, 3
	1, 1, 1, 1

LCM = 2 × 2 × 3 × 3 = 36

HCF of 3, 4, 6, 18 →

3	3
	1

2	4
2	2
	1

2	6
3	3
	1

2	18
3	9
3	3
	1

$3 = 3 \times 1$

$4 = 2 \times 2 \times 1$

$6 = 2 \times 3 \times 1$

$18 = 2 \times 3 \times 3 \times 1$

HCF = 1

16. Cost of 5 pencil = ₹ 125

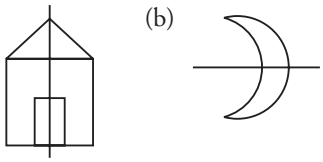
Cost of 1 pencil = ₹ 125 ÷ 5

= ₹ 25

Cost of 15 pencil = ₹ 25 × 15

= ₹ 375

17. (a) (b)



18. Cost of 3 kg Potatoes = 3 × ₹ 30 = ₹ 90

Cost of 2 kg Onions = 2 × ₹ 45 = ₹ 90

Cost of 1 kg Peas = 1 × ₹ 80 = ₹ 80

Cost of 5 kg carrots = 5 × ₹ 40 = ₹ 200

Cost of 3 kg Cauliflower = 2 × ₹ 35 = ₹ 70

₹ 530

She gave money to the shopkeeper = ₹ 500 + ₹ 200 = ₹ 700

Money she get back = ₹ 700 – ₹ 530

= ₹ 170

3. (a)

	hr	min
	2	15
+	2	30
	4	45

Ans is 4 hrs 45 min

= 4:45 pm

(b)

	hr	min
	2	15
+	9	45
	11	60

Ans is 11 hrs 60 min

= 12 hrs

= 12:00 pm

20.(a) This graph shows favourite game of students

(b) 7 students Play badminton.

(c) cricket is the most popular game.

(d) Total student = 6 + 8 + 10 + 7 + 7

= 38 students

CHAPTER-2
Number System

Rapid Refresh 1 **[Page No. 10]**

1. (a) 45,09,87,654 (b) 90,00,05,003

(c) 10,02,34,056 (d) 6,78,90,00,123

2. (a) Nine crore eighty seven lake sixty five thousand four hundred thirty two.

(b) Seventy crore twenty thousand fifteen.

(c) Thirty crore forty five lake seventy.

(d) Twenty crore eighty nine lakh forty seven.

3. (a) 20, 03, 75, 400

(b) 6, 05, 08, 679

(c) 95, 08, 10, 050

(d) 54, 22, 00, 500

4. (a) 8, 342, 698

(b) 56, 700, 209

(c) 123, 004, 007

(d) 34, 600, 020

5. (a) 309, 876, 543

Three hundred nine million eight hundred seventy six thousand five hundred forty three.

(b) 999, 444, 333

Nine hundred ninety nine million four hundred forty four thousand three hundred thirty three.

(c) 122, 000, 789

One hundred twenty two million seven hundred eighty nine.

(d) 430, 567, 892

Four hundred thirty million five hundred sixty seven thousand eight hundred ninety two.

Rapid Refresh-2 **[Page No. 14]**

1. (a) 9,43,52,789 ⇒ 90000000 + 4000000 + 300000 + 50000 + 2000 + 700 + 80 + 9

(b) 7,82,00,034 ⇒ 70000000 + 8000000 + 200000 + 00000 + 0000 + 000 + 30 + 4

(c) 1,50,76,892 ⇒ 10000000 + 5000000 + 000000 + 70000 + 6000 + 800 + 90 + 2

(d) 2,68,94,503 ⇒ 20000000 + 6000000 + 800000 + 90000 + 4000 + 500 + 00 + 3

2. (a) 5,00,40,890

(b) 7,03,60,700

3. (a) 80,000 (b) 70,00,000

(c) 6000 (d) 80,000

4.
90,00,00,000
– 7,00,00,000
830000000

5. (a) 78,43,521

(b) 16,67,890

(c) 9,00,05,321

(d) 4,56,21,398

6. (a) 34,78,901

(b) 1,23,45,678

(c) 6,54,23,109

(d) 5,67,89,234

7. (a) > (b) <

(c) = (d) <

8. (a) 9,87,234; 8,99,999; 6,76,543; 5,43,210

(b) 4,10,20,100; 3,21,56,789; 2,98,45,678; 1,23,56,789

Rapid Refresh-3 **[Page No. 17]**

1. (a) greatest digit – 87421
smallest digit – 12478

(b) greatest digit – 96530
smallest digit – 30569

(c) greatest digit – 9754321
smallest digit – 1234579

2. (a) greatest digit – 6666630
smallest digit – 3000006

(b) greatest digit – 9999541
smallest digit – 1111459

3. (a) 765410 (b) 9875320

(c) 987432

4. (a) 750 (b) 6520

(c) 23910 (d) 5,12,640

5.

	Nearest 100	Nearest 1000	Nearest 10000
(a)	85,700	86,000	90,000
(b)	12,500	13,000	10,000
(c)	5,67,100	5,67,000	5,70,000
(d)	789500	789000	7,90,000

6. (a) 5,00,000 (b) 98,00,000

(c) 6,00,000 (d) 8,00,000

Reflect your skills **[Page No. 18]**

1. greatest 5 digit no using 3, 5, 7, 1 and 9 as
97531
Subtracting 1 from it → – 1
97530

2.
largest 5 digit odd number = 99999
Smallest 5 digit even number = – 10000
89999

Answer is Eighty nine thousand nine hundred ninety nine.

3. LCM of 3, 5, 9

3	3, 5, 9
3	1, 5, 3
5	1, 5, 1
	1, 1, 1

LCM → 3 × 3 × 5 = 45

The number between 10,000 and 20,000 is 11,565.

4. Greatest number formed by the digit 307210 is 732100

On dividing it by 9

```
   8 1 3 4
9 ) 7 3 2 1 0 0 (
  – 7 2
    1 2
   –9
      3 1
     –2 7
        4 0
       – 3 6
          4 0
         – 3 6
            4
```

Hence the quotient is 8134.

5. The number is 10,000

$$\begin{array}{r} -\ 483 \\ \hline 9{,}517 \end{array}$$

The obtained number is not divisible by 11.

6. The numbers are 6000, 300

7. 2359999

4. 5,78,032

500000 + 70000 + 8000 + 000 + 30 + 2

$5 \times 10^5 + 7 \times 10^4 + 8 \times 10^3 + 0 \times 10^2 + 3 \times 10^1 + 2 \times 10^0$

Puzzle Time : [Page No. 18]

1. Smallest number → 134578

greatest number → 875431

2. 5,74,215

Real life Connections : [Page No. 19]

1. Estimated number 49,000

73,000

36,000

19,000

Total budget → 177,000

Final budget → 1,77,000

+ 15,000

1,92,000

Hands on Activity : [Page No. 19]

1. Do it yourself

CHAPTER-3
Roman Numerals

Rapid Refresh - 1 [Page No. 21]

1. (a) DCCCXLIV (b) MCMII

(c) CDLXVII (d) MMMXCI

2. (a) 1444 (b) 287

(c) 899 (d) 3865

3. (a) < (b) <

(c) < (d) >

4. (a) CXXIX + LXI

129 + 61

= 190 = CXC

(b) CCL – LXXIV

= 250 – 74

= 176

= CLXXVI

(c) XLVII + LIII

= 47 + 53

= 100 = C

(d) D – CXX

500 – 120

= 380

= CCCLXXX

Reflect your Skills : [Page No. 22]

1. MCMXLIV = 1944

Subtracting 300 = 1944 – 300

= 1644

2. MMXVIII = MCDXL

= 2018 – 1440

= 578

3. 3549 = MMMDXLIX

MMMDXLIX = DCLV

= 3549 – 655

= 2894

= MMDCCCXCIV

4. MMCDLXXVI → 2476

5. DCCCLXXXIX → 889

Multiplying the number by 2 → 889

× 2

1778

1778 → MDCCLXXVII

6. MCMLXXXIX → 1989

DCCXXIV → – 724

1265

1265 → MCCLXV

7. 3999 → MMMCMXCIX

Subtracting CCCXLV = Sub. 345

3999

– 345

3654

3654 → MMMDCLIV

8. MDCCCXCVI 1896

– DCCCXCVI → – 896

1000

= □

Hence the other numeral is M.

Puzzle Time : **[Page No. 22]**

1. MCMXL → 1940

+ 52

1992

Hence the number is → MCMXCII

2. CCCLXXVIII + DXII = ___?___

378 + 512

= 890

= DCCCXC

Real life connections : **[Page No. 23]**

1. Allotted seat → DCCLXXXV

50 seats ahead seat →

DCCLXXXV + 50

785 + 50

= 835 = DCCCXXXV

It i decide to move 30 seats backwards

835 – 30 = 805

= DCCCV

2. • In 4 hours the clock will show XI.

• The clock will show IV (4 O'clock)

Hand -On Activity **[Page No. 23]**

1. Do it yourself

CHAPTER-4

Operation on large numbers

Rapid Refresh 1 **[Page No. 28]**

1. (a)

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

(b)

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

(c)

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

2. (a)

	6	8	7	6	1	7	2
–	2	9	8	7	2	8	4
	3	8	8	8	8	8	8

(b)

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

(c)

	8	3	2	8	6	1	4
–	5	8	3	4	1	5	6
	2	4	9	4	4	5	8

3. (a)

	4	5	6	7	5	6	
+	3	6	7	8	8	0	
	8	2	4	6	3	6	

(b)

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

4. (a)

	9	5	8	9	6	7	1	1
–	7	8	1	6	5	8	3	1
	1	7	7	3	0	8	8	0

(b)

	1	0	0	8	0	7	0	8
–		1	3	7	9	8	0	9
		8	7	0	0	8	9	9

5. (a)

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

(b)

	6	3	5	2	6	0	0
–	4	3	0	7	2	2	8
	2	0	4	5	3	7	2

6. (a) 5859432

(b) 0

7. (a) 8399385 – 5988662 + 42,04,206
= 12603591 – 5988662
= 6614929

(b) 7,23,54,468 – 45316729 + 32623262
= 104977730 – 45316729
= 59661001

8. Number of males → 9841828
number of females → + 3784182
Total number of eligible voters → 13626010

9. Cloth produce in 2016 → 123543607 m
Cloth produce in 2017 → 45625430 m
Cloth produce in 2018 → 56793986 m
Cloth produce in 2019 → + 505042327 m
Total cloth produce in four year → 731005650 m

10. Wheat → 4,68,841 kg
Rice → 3,14,678 kg
Total wheat and Rice → 7,83,519 kg
Train carry cereal = 6,85,825 kg
Cereal left for second trip = 783519 kg
– 685825 kg
97694 kg

11. Cost of house → 1,48,75,320
Total money he had → ₹ 67,83,954
+ ₹ 39,63, 545
107,47,499
Money more he need → ₹ 1,48,75,320
– ₹ 1,07,47,499
41,27,821

12. (a) 28,492 + 34,556
= 28,490 + 34,560
= 63,050

(b) 1,89,786 – 65,728
= 1,89,800 – 65,700
= 1,24,100

(c) 8,79,321 + 5,27,116
= 8,79,300 + 5,27,100
=14,06,400

(d) 9,87,235 – 2,36,547
= 987000 – 237000
= 750000

Rapid Refresh-2 **[Page No. 31]**

1. (a) 6432 (b) 305
(c) 254 (d) 8301
(e) 0 (f) 1000, 39
(g) 573 × 309 (h) 642

2. (a) 287610 (b) 378300
(c) 9806000

3. (a) 9999 × 40
= 399960
(b) 15325 × 400
= 6130000
(c) 1289 × 300
= 386700

4. (a) 5 × 764 × 2
= (5 × 2) × 764
= 10 × 764
= 7640

(b) 4 × 289 × 25
= (4 × 25) × 289
= 100 × 289
= 28900

(c) 2 × 6257 × 500
= 2 × 500 × 6257
= 1000 × 6257
= 6257000

Rapid Refresh-3 **[Page No. 32]**

1. (a)

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

(b)

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

(c)

			9	6	5	3	2
				×	8	3	5
		4	8	2	6	6	0
	2	8	9	5	9	6	×
7	7	2	2	5	6	×	×
8	0	6	0	4	2	2	0

(d)

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

(e)

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

(f)

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

2. (a)

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

(b)

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

3	3	2	7	1	8	0	4

(c)

				8	9	8	5
			×	2	7	8	9
			8	0	8	6	5
		7	1	8	8	0	×
	6	2	8	9	5	×	×
1	7	9	7	0	×	×	×
2	5	0	5	9	1	6	5

3. Total no of school = 12637
number of student in a school = 2035
Total number of student =

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

Hence Total number of students are 25716295

4. Milk sells in one day = 653 *l*
Total milk sell in 365 day =

		6	5	3	*l*
		×	3	6	5
		3	2	6	5
	3	9	1	8	×
+	1	9	5	9	×	×
2	3	8	3	4	5	*l*

Hence total mils sells in 365 days is 238345 *l*.

5. Weight of a bay of rice = 104.890 kg
Total weight of 658 bags =

		1	0	4.	8	9	0
				×	6	5	8
		8	3	9	1	2	0
	5	2	4	4	5	0	×
6	2	9	3	4	0	×	×
6	9	0	1	7.	6	2	0

Hence weight of 658 bags is 69017 kg 620 g

6. length of a bundle of wire = 356 cm 62 cm
length of 234 bundles =

		3	5	6.	6	2
			×	2	3	4
	1	4	2	6	4	8
1	0	6	9	8	6	×
7	1	3	2	4	×	×
8	3	4	4	9.	0	8

Hence length of bundles is 83449 m 08 cm.

Rapid Refresh - 4 : **[Page No. 35]**

1. (a) 1 (b) 1
(c) 39,870 (d) 0
(e) 0 (f) 2,22,088

2. (a) 3,42,961 ÷ 37

```
    9269
37)342961(
  -333
    99
   -74
    256
   -222
     341
    -333
       8
```

quotient → 9269
Remainder → 8
Check → dividend = divisor × quotient + Remainder
3,42,961 = 37 × 9269 + 8
= 342953 + 8
= 342961
Hence the answer is correct.

(b) 34,20,16,125 ÷ 125

```
      2736129
125)342016125(
  -250
    920
   -875
     451
    -375
      766
     -750
       161
      -125
        362
       -250
         1125
        -1125
            0
```

quotient = 2736129
Remainder = 0
Check → dividend = divisor × quotient + remainder
34,20,16,125 = 125 × 2736129 + 0
= 34,20,16,125
The answer is correct.

(c) 4,39,715 ÷ 148

```
    2971
148)439715(
  -296
    1437
   -1332
     1051
    -1036
      155
     -148
        7
```

quotient → 2971
Remainder → 7
Check → Dividend = Divisor × quotient + Remainder
4,39,715 = 148 × 2971 + 7
= 439708 + 7
= 439715
The answer is correct.

3. (a) dividend = divisor × quotient + Remainder
= 189 × 3078 + 97
= 581742 + 97
= 581839

(b) dividend = Divisor × quotient +

Remainder

$= 212 \times 12545 + 6$

$= 2659540 + 6$

$= 2659546$

4. (a) Quotient → 2468
Remainder → 5

(b) Quotient → 2350
Remainder → 00

(c) Quotient → 97358
Remainder → 0

(d) Quotient → 423456
Remainder → 78

(e) Quotient → 28765
Remainder → 433

(f) Quotient → 9875
Remainder → 100

5. Q = 29
R = 3
Dividend = 4904
Divisor = ?
Dividend = Divisor × Quetient + Remainder
$4904 = D \times 29 + 3$
$4904 - 3 = D \times 29$
$4901 = D \times 29$
$D = 4903 \div 29$

```
  169
29)4901(
 -29
  200
 -174
   261
  -261
     4
```

Hence the divisor is 169.

6. The cost of 216 Mobile phones = ₹ 11,72,880
The cost of 1 mobile phones = ₹ 11,72,880 ÷ 216

```
   5430
216)117280(
  -1080
    928
   -864
     648
    -648
       0
      -0
       0
```

Hence cost of 1 Mobile phone is ₹ 5430.

7. Money distributed among 125 labourers = ₹ 5,73,125

Money each labourer receive = $\frac{₹\ 5,73,125}{125}$

= 4501

```
   4585
125)573125(
  -500
    731
   -625
    1062
   -1000
      625
     -625
        0
```

Hence each labourer receive ₹ 4585.

8. Total collection of industrial organisation = ₹ 75,68,825
Value of each share = ₹ 425
Total number of share = ₹ 75,68,825 ÷ ₹ 425 = 17809

```
   17809
425)756825(
  -425
   3318
  -2975
    3438
   -3400
     3825
    -3825
        0
```

Hence total number of shares issued by organisation are 17809.

Rapid Refresh-5 : **[Page No. 36]**

1. (a) 5873×320

$= 6000 \times 300$

$= 1800000$

(b) 127×4809

= 100 × 5000
= 5,00,000

(c) 935 × 780
= 900 × 800
= 720000

2. Earring of one day = ₹ 947 = ₹ 900
Earning of month February (28 day)
= ₹ 900 × 28
= ₹ 900 × 30
= ₹ 27000

3. Cost of 1 chair = ₹ 475
= ₹ 500
Cost of 184 chair = ₹ 500 × 184
= ₹ 500 × 200
= ₹ 100000

4. Ticked sell everyday = 498 = 500 tickets
no of day from January to April = 31 + 28 + 31 + 30
= 120 day
Estimated value = 100 days
no. of ticked sold in 4 months from January do April
= 500 × 100
= 50000 ticked

5. (a) 1835 ÷ 27
2000 ÷ 30
Q = 66

(b) 685920 ÷ 7312
700000 ÷ 7000
Q = 100

(c) 3984 ÷ 368
4000 ÷ 400
Q = 10

6. Weight of 29 bags = 2869 kg
Weight of 1 day = 2869 kg ÷ 29
= 3000 ÷ 30
= 100 kg

7. Cost of 2931 books = ₹ 627856
Cost of 1 book = ₹ 627856 ÷ 2931
= ₹ 600000 ÷ 3000
= ₹ 200

Rapid Refresh - 6 ; [Page No. 37]

1. (a) 16 + 15 ÷ 5
= 16 + 3
= 19

(b) 17 × 10 ÷ 2
= 17 × 5
= 85

(c) 21 – 8 × 2
= 21 – 16
= 5

(d) 35 × 48 + 2024
= 1680 + 2024
= 3704

(e) 4025 ÷ 175 + 1492
= 23 + 1492
= 1515

(f) 16 – 8 ÷ 2 – 3
= 16 – 4 – 3
= 12 – 3
= 9

(g) 37 – 6 × 4 + 32 ÷ 4
= 37 – 6 × 4 + 8
= 37 – 24 + 8
= 45 – 24
= 21

(h) 8 × 13 – 4 × 15
= 104 – 60
= 44

(i) 96 ÷ 16 + 34 × 10 – 13
= 6 + 34 × 10 – 13
= 6 + 340 – 13
= 346 – 13
= 333

2. Cost of 198 m of wire = ₹ 4,22,928
Cost of 1 m of wire = ₹ 4,22,928 ÷ 198
Cost of 267 m of wire = ₹ 4,22,928 ÷ 198 × 267
= ₹ 2136 × 267
= ₹ 570312
Hence the cost of 267 m of wire is ₹ 570312.

3. 168 glasses are packed in = 1 Packet
1 glass is packed in → 1 ÷ 168 packet
766416 glasses are packed in → $\frac{1 \times 766416}{168}$
= 4562 Packets

```
      4 5 6 2
168 ) 7 6 6 4 1 6 (
    – 6 7 2 ↓
      9 4 4
    – 8 4 0 ↓
      1 0 4 1
    – 1 0 0 8 ↓
        3 3 6
      – 3 3 6
        0
```

Hence 766416 glasses are packed in 4562 packets.

766416 glasses packed in = 4562

1 glass packed in = $\frac{766416}{4562}$

335 glass packed in = 168 × 335 = 56280

Hence 335 glass packed in 56280 glasses.

4. Passengers travel in 346 buses = 25950 passengers

Passengers travel in 1 bus = 25950 ÷ 346

= 75 Passengers

```
      7 5
346 ) 2 5 9 5 0 (
    – 2 4 1 2 ↓
      1 8 3 0
    – 1 8 3 0
        0
```

Passengers travel in 268 buses = 75 × 268

= 20100 Passengers

Hence 20100 passengers can travel in 268 buses.

5. Cost of 125 washing machine = ₹ 16,57,000

Cost of 1 washing machine = 16,57000 ÷ 125

= ₹ 13256

```
      1 3 2 5 6
125 ) 1 6 5 7 0 0 0 (
    – 1 2 5 ↓
      4 0 7
    – 3 7 5 ↓
      3 2 0
    – 2 5 0 ↓
      7 0 0
    – 6 2 5 ↓
        7 5 0
      – 7 5 0
        0
```

Cost of 234 washing machine = ₹ 13256 × 234

= ₹ 3101904

Reflect your Skills : [Page No. 38]

1. Cars produced is one year → 2,36,578

production increases by → 15,748

in next year total number of car produce in second year = 2 3 6 5 7 8

+ 1 5 7 4 8

2 5 2 3 2 6

Total car processed in these two year = 2,36,578 + 2,52,326 = 4, 88,904 cars

Cars produced in next decade = 488904 × 10

= 4889040 cars

2. Population in first year = 3,45,678

Population increased in four year = 4 × 12,345

= 49,380

Population after four year = 3,45,678

+ 49,380

3,95,058

3. Boxes packed in one month = 1,47,865

Boxes pack in 2 years (24 months) = 147865 × 24

= 3,54,8760 boxes.

4. Sum of numbers = 654321

+321456

975777

Multiplying the same by 19 = 975777

× 19

1,85,39,763

5. Number given = 8,92,338

Subtracting 56,789 from number =

8,92,338

– 56,739

8,35,549

Dividing it by 11 → 835549 ÷ 11

= 75959

6. Saving of one month = ₹ 1,12,000

Saving of 5 years (60 months) = ₹ 1,12,000 × 60

= ₹ 67,20,000

Saving of 4 years (48 months) = ₹ 1,12,000 × 48

= ₹ 53,76,000

Difference of saving for five years and saving for four years → ₹ 67,20,000

₹ 53,76,000

₹ 13,44,000

7. Largest 5 digit number → 99999

Smallest 6 digit number → 1000000

Product of numbers → 99999 × 100000

= 9999900000

Sum of numbers → 9 + 9 + 9 + 9 + 9 + 0 + 0 + 0 + 0 + 0

= 45

8. Cost of laptop = ₹ 85,600

Cost of Mobile phone = ₹ 42,500

Total cost paid by Mohan = ₹ 1,28,100

Puzzle Time : **[Page No. 38]**

1. Let the number be x,

dividend = divisor × quotient + remender.

$x = 6 \times 25 + 4$

$x = 154$

2. Items produced in one day = 1,568 items

98 items packed in = 1 box

1 items packed in = $\frac{1}{98}$ box

1568 items packed in = $\frac{1}{98} \times 1568$ box

= 16 boxes

No items will remain unpacked at the end of the day.

Real life Connections : **[Page No. 38]**

1. Roads build by 18,250 bricks = 1 km

Road build by 1 brick = $\frac{1}{18250}$ km

Road build by 54,750 brick = $\frac{1}{18250} \times$ 54,750 km

= 3 km

Hence they can still build 3 km Road.

2. Ticket sold on weekends = $435 + 435 \times \frac{25}{100}$

= 543.75

Total ticket sold = 435 × 5 + 543.75 × 2

= 2175 + 1087.5

= 3262.5 ticket

= 3263 ticket

Hands on Activity : **[Page No. 38]**

1. Do It yourself.

CHAPTER-5
Multiples and factors

Rapid Refresh 1 **[Page No. 43]**

1. (a) 1260

divisibility by 3 → 1 + 2 + 6 = 9

∵ 9 is divisible by 3

 1260 is also divisible by 3

divisibility by 4 → 60 ÷ 4 = 15

∵ 60 is divisible by 4 so, 1260 is also divisible by 4

divisibility by 5 → ∵ there is 0 at the ones place of a number So 1260 is divisible by 5.

divisibility by 6 → ∵ there is 0 at ones place so number is divisible by 2

∵ 1 + 2 + 6 + 0 = 9 is divisible by 3 so 1260 is divisible by 3

Hence the number is divisible by 6

divisibility by 7 → doubling the ones digit, the result is 0

Subtracting this result from remaining number 126 – 0 = 126

∵ the resultant number is divisible by 7 so the whole number 1260 is divisible by 7.

divisibility by 8 → 260 is not divisible by 8 so 1260 will not be divisible by 8.

divisibility by 9 → 1 + 2 + 6 + 0 = 9 is divisible by 9 so the number 1260 is divisible by 9.

divisibility by 10 → Since there is 0 at ones place so the number 1260 is divisible by 10.

[Do remaining parts as part a]

2. 108, 72, 180, 324

3. 1020, 1050, 1080

4. 2211

$\because$ 2 + 1 = 3 [Sum of even place digits]

2 + 1 = 3 (Sum of odd place digit)

Subtracting the results = 3 – 3 = 0

Hence the number is divisible by 11.

Rapid Refresh -2 **[Page No. 46]**

1. (a) $26 \rightarrow 1 \times 26 = 26$

$2 \times 13 = 26$

$13 \times 2 = 26$

$26 \times 1 = 26$

Hence the factors are 1, 2, 13, 26.

(b) $36 \rightarrow 1 \times 36 = 36$

$2 \times 18 = 36$

$3 \times 12 = 36$

$4 \times 9 = 36$

$6 \times 6 = 36$

$9 \times 4 = 36$

$12 \times 3 = 36$

$18 \times 2 = 36$

$36 \times 1 = 36$

So the factor are 1, 2, 3, 4, 6, 9, 12, 18, 36.

(c) $45 \rightarrow 1 \times 45 = 45$

$3 \times 15 = 45$

$5 \times 9 = 45$

$9 \times 5 = 45$

$15 \times 3 = 45$

$45 \times 1 = 45$

Hence the factors are 1, 3, 5, 9, 15, 45

(d) $75 \rightarrow 1 \times 75 = 75$

$3 \times 25 = 75$

$5 \times 15 = 75$

$15 \times 5 = 75$

$25 \times 3 = 75$

$75 \times 1 = 75$

Hence the factors are 1, 3, 5, 15, 25, 75.

(e) $56 \rightarrow 1 \times 56 = 56$

$2 \times 28 = 56$

$4 \times 14 = 56$

$7 \times 8 = 56$

$8 \times 7 = 56$

$14 \times 4 = 56$

$28 \times 2 = 56$

$56 \times 1 = 56$

Hence the factors are 1, 2, 4, 7, 8, 14, 28, 56.

(f) $98 \rightarrow 1 \times 98 = 98$

$2 \times 49 = 98$

$7 \times 14 = 98$

$14 \times 7 = 98$

$49 \times 2 = 98$

$98 \times 1 = 98$

Hence the factors are 1, 2, 7, 14, 49, 98

(g) $81 \rightarrow 1 \times 81 = 81$

$3 \times 27 = 81$

$9 \times 27 = 81$

$9 \times 9 = 81$

$27 \times 3 = 81$

$81 \times 1 = 81$

Hence the factors are 1, 3, 9, 27, 81

(h) $108 \rightarrow 1 \times 108 = 108$

$2 \times 54 = 108$

$3 \times 36 = 108$

$4 \times 27 = 108$

$6 \times 18 = 108$

$9 \times 12 = 108$

$12 \times 9 = 108$

$18 \times 6 = 108$

$27 \times 4 = 108$

$36 \times 3 = 108$

$54 \times 2 = 108$

$108 \times 1 = 108$

Hence the factors are 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108

2. 11, 67, 19, 83, 89

3. 51, 81, 87, 78, 93

4. (a) 7, 11, 13, 17, 19, 23, 29, 31

(b) 37, 41, 43, 47, 53, 59, 61

(c) 53, 59, 61, 67, 71, 73, 79

(d) 71, 73, 79, 83, 89, 97

5. (a) 62, 63, 64, 65, 66, 68, 69, 70, 72, 74, 75, 76, 77, 78

(b) 21, 22, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39

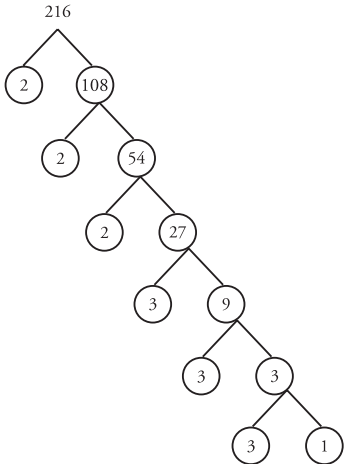
(c) 72, 74, 75, 76, 77, 78, 80, 81, 82, 84,

85, 86, 87, 88

(d) 81, 82, 84, 85, 86, 87, 88, 90, 91, 92, 93, 94,

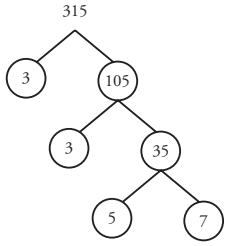
Rapid Refresh -3 : **[Page No. 49]**

1. (a)



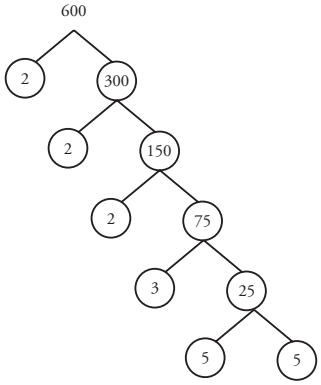
So 219 = 2 × 2 × 2 × 3 × 3 × 3

(b)



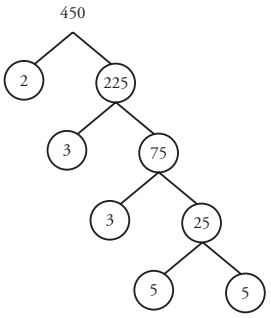
315 = 3 × 3 × 5 × 7

(c)



600 = 2 × 2 × 2 × 3 × 5 × 5

(d)



450 → 2 × 3 × 3 × 5 × 5

2. (a) 120

2	120
2	60
2	30
3	15
5	5
	1

120 → 2 × 2 × 2 × 3 × 5

$= 2^3 \times 3 \times 5$

(b) 420

2	420
2	210
3	105
5	35
7	7
	1

$420 \rightarrow 2 \times 2 \times 3 \times 5 \times 7$

$= 2^2 \times 3 \times 5 \times 7$

(c) 168

2	168
2	84
2	42
3	21
7	7
	1

$168 \rightarrow 2 \times 2 \times 2 \times 3 \times 7$

$= 2^3 \times 3 \times 7$

(d) 728

2	728
2	364
2	182
7	91
13	13
	1

$728 = 2 \times 2 \times 2 \times 7 \times 13$

$= 2^3 \times 7 \times 13$

3. (a) Multiple of 2 = 2, 4, 6, 8, 10, 12, 16, 18, 20

3 = 3, 6, 9, 12, 15, 18, 21

Hence the common multiple of 2 and multiple of 3 = 6, 12, 18.

(b) Multiple of 4 → 4. 8, 12, 16, 20, 24, 28, 32,

Multiple of 8 → 8, 16, 24, 32, 40

Hence the common multiple are 8, 16, 24

(c) Multiple of 9 → 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, 108, 117,

Multiple of 12 → 12, 24, 36, 48, 60, 72, 84, 96, 108, 120

Hence the common multiple are 36, 72, 108.

4. (a) 2 and 3

2 → 2, 4, 6, 8,

3 → 3, 6, 9,

Hence LCM of 2 and 3 is 6.

(b) 4 → 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68

5 → 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70,

12 → 12, 24, 36, 48, 60, 72,

LCM of 4, 5, 12 is 60.

(c) 6 → 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 98,

15 → 15, 30, 45, 60, 75, 90, 105, 120,

9 → 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, 108,

LCM of 6, 15 and 9 is 90.

5. (a)

2	28
2	14
7	7
	1

2	84
2	42
3	21
7	7
	1

$28 = 2^2 \times 7$

$84 = 2^2 \times 3 \times 7$

$LCM = 2^2 \times 3 \times 7$

$= 84$

(b)

2	104
2	52
2	26
13	13
	1

2

2	128
2	64
2	32
2	16
2	8
2	4
2	2
	1

2	176
2	88
2	44
2	22
4	11
	1

$104 = 2^3 \times 13$

$128 = 2^7$

$176 = 2^4 \times 11$

$LCM = 2^7 \times 13 \times 11$

$= 18304$

(c)

3	405
3	135
3	45
3	15
5	5
	1

3	783
3	261
3	87
29	29
	1

3	513
3	171
3	57
19	19
	1

$405 = 3^4 \times 5$

$783 = 3^2 \times 29$

$513 = 3^3 \times 19$

$LCM = 3^4 \times 29 \times 19 \times 5$

$= 223,155$

6. (a)

2	72, 88
2	36, 44
2	18, 22
3	9, 11
3	3, 11
11	1, 11
	1, 1

$LCM = 2^3 \times 3^2 \times 11$

$= 792$

(b)

2	60, 72, 96
2	30, 36, 48
3	15, 18, 24
2	5, 6, 8
2	5, 3, 4
2	5, 3, 2
3	5, 3, 1
5	5, 1, 1
	1, 1, 1

$LCM = 2^5 \times 3^2 \times 5$

$= 1440$

(c)

2	441, 630, 945
3	441, 315, 945
3	147, 105, 315
3	49, 35, 105
5	49, 35, 35
7	49, 7, 7
7	7, 1, 1
	1, 1, 1

$LCM = 2 \times 3^3 \times 5 \times 7^2$

$= 13,230$

Rapid Refresh-4 **[Page No. 53]**

1. (a) Factors of 12 = 1, 2, 3, 4, 6, 12

Factors of 15 = 1, 3, 5, 15

HCF of 15 → 3

(b) Factors of 16 → 1, 2, 4, 8, 16

Factors of 32 → 1, 2, 4, 8, 16, 32

Factors of 48 → 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

HCF of 16, 32 and 48 → 16

(c) Factor of 21 → 1, 3, 7, 21

Factor of 24 → 1, 2, 3, 4, 6, 8, 12, 24

Factor of 36 → 1, 2, 3, 4, 6, 9, 12, 18, 36

HCF of 21, 24, 36 → 3

2. (a) 36 and 54

2	36
2	18
3	9
3	3
	1

2	54
3	27
3	9
3	3
	1

$36 = 2^2 \times 3^2$

$54 = 2 \times 3^3$

HCF of 36 and 54 → $2 \times 3^2 = 18$

(b) 42, 63 and 105

2	42
3	21
7	7
	1

3	63
3	21
7	7
	1

3	105
7	35
5	5
	1

$42 \rightarrow 2 \times 3 \times 7$

$63 \rightarrow 3 \times 3 \times 7$

$105 \rightarrow 3 \times 7 \times 5$

HCF of 42, 63, 105 $\rightarrow 3 \times 7 = 21$

(c) 21, 24 and 36

3	21
7	7
	1

2	24
2	12
2	6
3	3
3	1

2	36
2	18
3	9
3	3
	1

$21 \rightarrow 3 \times 7$

$24 \rightarrow 2 \times 2 \times 2 \times 3$

$36 \rightarrow 2 \times 2 \times 3 \times 3$

HCF of 21, 24, and 36 $\rightarrow 3$

3. (a) 96 and 120

$96\overline{)120}(1$

-96

$24\overline{)96}(4$

-96

0

HCF of 96 and 120 is 24.

(b) 690, 966, 1150

$690\overline{)966}(1$

-690

$276\overline{)690}(2$

-552

$138\overline{)276}(2$

-276

0

HCF of 690 nad 966 is 138.

$138\overline{)1150}(8$

-1104

$46\overline{)138}(3$

-138

0

Hence HCF of 690, 966, 1150 is 46.

(c) 1085, 1435 and 2135

$1085\overline{)1435}(1$

-1085

$350\overline{)1085}(3$

-1050

$35\overline{)350}(10$

-350

0

HCF of 1085, 1435, is 35

$35\overline{)2135}(61$

$-210\downarrow$

35

-35

0

Hence the HCF of 1085, 1435 and 2135 is 35.

4. LCM of 15, 25, 40, 50

2	15, 25, 40, 50
2	15, 25, 20, 25
2	15, 25, 10, 25
3	15, 25, 5, 25
5	5, 25, 5, 25
5	1, 5, 1, 5
	1, 1, 1, 1

LCM of 15, 25, 40, 50 $\rightarrow 2^3 \times 3 \times 5^2$

$= 600$

Hence they will meet again 600 sec.

5. LCM of 8, 12 and 16

2	8, 12, 16
2	4, 6, 8
2	2, 3, 4
2	1, 3, 2
3	1, 3, 1
	1, 1, 1

LCM is $2^4 \times 3 = 48$

Smallest number of 4 digit is 1000

$48\overline{)1000}(20$

$-96\downarrow$

40

-00

40

$\Rightarrow \quad 48 - 40 = 8$

$\Rightarrow \quad 1000 + 8 = 1008$

Hence the smallest four digit number is 1008.

Reflect your skills : **[Page No. 53]**

1. The number as 6 and 24

because HCF of 6 and 24

is 6

and LCM of 6 and 24 is 24.

2. There are 12 multiples of 8 between 100 and 200 and the multiples are 104, 112, 120, 128, 136, 144, 152, 160, 168, 176, 184, 192.

3. The largest possible value of number is 54.

2	6
3	3
	1

3	9
3	3
	1

The LCM of 6 and 9

Multiple of 6 = 2×3

Multiple of 9 = $3 \times 3 = 3^2$

$2 \times 3^2 = 18$

and 54 is the only multiple of 18 which is neither divided by 4 nor by 5.

Hence the answer is 54.

4. LCM of 8, 12, 18

2	8, 12, 18
2	4, 6, 9
2	2, 3, 9
3	1, 3, 9
3	1, 1, 3
	1, 1, 1

Hence the LCM is $2^3 \times 3^2 = 72$

So the number is $72 + 5 = 77$

5. Number $a \times$ number b = HCF × LCM of (a and b)

$$144 = 12 \times \text{LCM}$$

$$\text{LCM} = \frac{144}{12} = 12$$

$$\text{LCM} = 12$$

Hence the two numbers Having HCF = 12 and LCM = 12 are 12, 12

6. HCF of 15, 18, 30

3	15, 18, 30
1	5, 6, 10
	5, 6, 10

HCF is 3

90 is the multiple of 3

So no marbles will be left over.

7. Prime factors of 360 →

2	360
2	180
2	90
3	45
3	15
5	5
	1

$2 \times 2 \times 2 \times 3 \times 3 \times 5$

$= 2^3 \times 3^2 \times 5^1$

P.F of 60 → $2^2 \times 3 \times 5$

P.F of 90 → $2 \times 3^2 \times 5$

LCM of 60, 90 = $2^2 \times 3^2 \times 5$

$= 180$

LCM of 60, 90 → $2 \times 3 \times 5 = 30$

8. LCM of 9 and 12

$9 = 3 \times 3$

$12 = 2 \times 2 \times 3$

LCM = $3^2 \times 2^2 = 36$

So the smallest possible value of number divisible by both and 12 is 36.

Puzzle Time : **[Page No. 53]**

1. Multiple of 6, more than 100 →

= 102, 108, 114, 120,

Multiple of 9, more than 100 →

108, 117, 126, 135,

So the smallest number divisible by both 6 and 9 lies between 100 and 200 is 108.

2. The prime number is 41 because other number 51 and 62 are divisible by more than two number 1 and itself hence they are not prime numbers.

3. HCF of 16, 24, 36

2	16
2	8
2	4
2	2
	1

2	24
2	12
2	6
3	3
	1

2	36
2	18
3	9
3	3
	1

$16 = 2^4$

$24 = 2^3 \times 3$

$36 = 2^2 \times 3^2$

HCF of 16, 24, 36, is $2^2 = 4$

Hene largest measure of milk that can measure the milk from each container exactly is 4 *l*.

We need to use 4 time for first container 6 times for second container and 9 times for third container.

Real life connection : **[Page No. 54]**

1. HCF of 18, 42

2	18
3	9
3	3
	1

2	42
3	21
7	7
	1

$18 \rightarrow 2 \times 3^2$

$42 = 2 \times 3 \times 7$

HCF $= 2 \times 3 = 6$ ml

Hence both measuring cup can exactly measure 6 ml of sauce.

Chef need $\frac{6\text{ l}}{6\text{ ml}} = \frac{6000\text{ ml}}{6\text{ ml}} = 1000$ times

to get exactly 6 litre of sauce.

2. HCF of 24 m, 36 m

2	24
2	12
2	6
3	3
	1

2	36
2	18
3	9
3	3
	1

$24 \rightarrow 2^3 \times 3$

$36 \rightarrow 2^2 \times 3^2$

HCF $= 2^2 \times 3$

$= 12$ m

Hence longest piece she can cut from both rolls is 12 m

She will get 2 piece from first roll and 3 piece from second roll.

Hands On Activity : **[Page No. 54]**

1. Do it yourself

CHAPTER-6
Fractions

Rapid Refresh 1 **[Page No. 59]**

1. (a) mixed (b) proper

(c) Unit (d) Improper

2. (a) $\frac{7}{3}$

$3\overline{)7(2}$
-6
1

Hence $\frac{7}{3} = 2\frac{1}{3}$

(b) $\frac{80}{7}$

$7\overline{)80(11}$
-7
10
-7
3

Hence $\frac{80}{7} = 11\frac{3}{7}$

(c) $\frac{41}{5}$

$5\overline{)41(8}$
-40
1

$\frac{41}{5} = 8\frac{1}{5}$

(d) $\frac{91}{88}$

$88\overline{)91(1}$
-88
3

$\frac{91}{88} = 1\frac{3}{88}$

3. (a) $5\frac{2}{9} \Rightarrow \frac{9\times5+2}{9} = \frac{45+2}{9} = \frac{47}{9}$

(b) $8\frac{1}{8} \Rightarrow \frac{8\times8+1}{8} = \frac{64+1}{8} = \frac{65}{8}$

(c) $7\frac{2}{5} \Rightarrow \frac{5\times7+2}{5} = \frac{35+2}{5} = \frac{37}{5}$

(d) $11\frac{1}{13} \Rightarrow \frac{11\times13+1}{13} = \frac{143+1}{13} = \frac{144}{13}$

4. (a) unlike (b) like

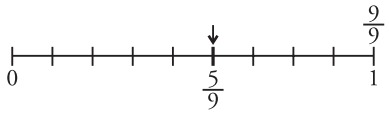
(c) unlike (d) like

5. (a) Unlike fraction

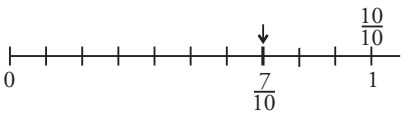
(b) Unlike fraction

6. (a) $\frac{3}{5}$ (b) $\frac{8}{12} = \frac{2}{3}$

7. (a)



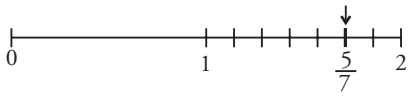
(b)



(c) $\frac{12}{7} \Rightarrow$

$$7\overline{)12}\ (1$$
$$-7$$
$$5$$

$$= 1\frac{5}{7}$$



Rapid Refresh-2 : **[Page No. 61]**

1. (a) $\frac{7}{9} = \frac{7\times2}{9\times2} = \frac{14}{18}$

$$\frac{7\times3}{9\times3} = \frac{21}{27}$$

$$\frac{7\times4}{9\times4} = \frac{28}{36}$$

(b) $\frac{2}{7} \Rightarrow \frac{2}{7}\times\frac{2}{2} = \frac{4}{14}$

$$\frac{2}{7}\times\frac{3}{3} = \frac{6}{21}$$

$$\frac{2}{7}\times\frac{4}{4} = \frac{8}{28}$$

(c) $\frac{50}{75} = \frac{50\times2}{75\times2} = \frac{100}{150}$

$$\frac{50}{75} \div \frac{25}{25} = \frac{2}{3}$$

$$\frac{50}{75} \div \frac{5}{5} = \frac{10}{15}$$

(d) $\frac{9}{12} \Rightarrow \frac{9}{12} \div \frac{3}{3} = \frac{3}{4}$

$$\frac{9\times2}{12\times2} = \frac{18}{24}$$

$$\frac{9\times3}{12\times3} = \frac{27}{36}$$

2. (a) $\frac{4}{20}, \frac{5}{25}, \frac{6}{30}$

(b) $\frac{8}{28}, \frac{10}{35}, \frac{12}{42}$

(c) $\frac{16}{20}, \frac{20}{25}, \frac{24}{30}$

3. (a) 40 (b) 20

(c) 65 (d) 27

4. (a) $\frac{4}{5} = \frac{32}{40}$ (b) $\frac{4}{5} = \frac{20}{25}$

5. (a) $\frac{2}{9} \times \frac{18}{81}$

$$162 = 162$$

Yes, they are equivalent fraction.

(b) $\frac{5}{7} \times \frac{35}{94}$

$$5 \times 94 = 7 \times 35$$

$$\Rightarrow \quad 470 \neq 245$$

No, they are not equivalent fraction.

(c) $\frac{9}{11} \times \frac{11}{9}$

$$81 \neq 121$$

No, they are not equivalent fractions.

6. (a) $\frac{16}{21}$ (b) $\frac{7}{15}$

Rapid Refresh-3 : **[Page No. 63]**

1. (a) $\frac{3}{5}$ (b) $\frac{4}{9}$

(c) $\frac{5}{7}$ (d) $\frac{11}{21}$

(e) $\frac{5}{11}$ (f) $\frac{8}{25}$

(g) $\frac{13}{11}$ (h) $\frac{81}{127}$

3. (a) $\frac{3}{5}, \frac{1}{6}$

5	5, 6
2	1, 6
3	1, 3
	1, 1

LCM of 5, 6 → 5 × 2 × 3 = 30

$$\frac{3\times6}{5\times6} = \frac{18}{30}$$

$$\frac{1\times5}{6\times5} = \frac{5}{30}$$

$\frac{5}{30}$ is smaller fraction so $\frac{1}{6}$ is smaller fraction.

(b) $\frac{8}{12}, \frac{8}{10}$

2	12, 10
2	6, 5
3	3, 5
5	1, 5
	1, 1

LCM of 12 and 10 = 2 × 2 × 3 × 5
= 60

$$\frac{8\times5}{12\times5} = \frac{40}{60}$$

$$\frac{8\times6}{10\times6} = \frac{48}{60}$$

Comparing $\frac{40}{60}$ and $\frac{48}{60}$,

$\frac{40}{60}$ is smaller fraction than $\frac{48}{60}$

$\frac{8}{12}$ is smaller fraction

(c) $\frac{6}{7}, \frac{6}{5}$

5	7, 5
7	7, 1
	1, 1

LCM of 7 and 5 → 35

$$\frac{6\times5}{7\times5} = \frac{30}{35}$$

$$\frac{6\times7}{5\times7} = \frac{42}{35}$$

$\frac{30}{35}$ is smaller fraction than $\frac{42}{35}$

So $\frac{6}{7}$ is smaller fraction.

(d) $\frac{8}{9}, \frac{17}{9}$

$\frac{8}{9}$ is smaller fraction.

(c) $\frac{2}{9}, \frac{11}{15}$

3	9, 15
3	3, 5
5	1, 5
	1, 1

LCM of 9, 15 → 3 × 3 × 5
= 45

$$\frac{2\times5}{9\times5} = \frac{10}{45}$$

$$\frac{11\times3}{15\times3} = \frac{33}{45}$$

Here $\frac{10}{45}$ is smaller fraction than $\frac{33}{45}$

Hence $\frac{2}{9}$ is smaller fraction.

(f) $5\frac{1}{6}, \frac{21}{4}$

$\Rightarrow \frac{31}{6}, \frac{21}{4}$

2	6, 4
2	3, 2
3	3, 1
	1, 1

LCM of 6 and 4 = 2 × 2 × 3
= 12

$$\frac{31\times2}{6\times2} = \frac{62}{12}$$

$$\frac{21\times3}{4\times3} = \frac{63}{12}$$

So $\frac{62}{12}$ is smaller fraction than $\frac{63}{12}$

Hence $\frac{31}{6}$ is smaller fraction.

(g) $\frac{13}{23}, \frac{12}{23}$

$\frac{12}{23}$ is smaller fraction.

(h) $2\frac{3}{11}, 3\frac{3}{8}$

$\Rightarrow \frac{25}{11}, \frac{27}{8}$

2	11, 8
2	11, 4
2	11, 2
11	11, 1
	1, 1

LCM of 11, 8 $= 2 \times 2 \times 2 \times 11$

$= 88$

$$\frac{25\times8}{11\times8} = \frac{200}{88}$$

$$\frac{27\times11}{8\times11} = \frac{297}{88}$$

So $\frac{200}{88}$ is smaller fraction than $\frac{297}{88}$

Hence $\frac{25}{11}$ is smaller fraction.

3. (a) $\frac{2}{3}, \frac{21}{10}$

$\frac{2}{3} \times \frac{21}{10}$

$2 \times 10 < 3 \times 21$

$20 < 63$

$\square$ $\frac{2}{3} < \frac{21}{10}$

(b) $4\frac{1}{5}, \frac{21}{4}$

$\Rightarrow \frac{21}{5} \times \frac{21}{4}$

$4 \times 21 = 21 \times 5$

$84 < 105$

So $\frac{21}{5} < \frac{21}{4}$

(c) $4\frac{2}{7}, \frac{13}{3}$

$\frac{30}{7} \times \frac{13}{3}$

$30 \times 3 < 7 \times 13$

$90 < 91$

$4\frac{2}{7} < \frac{13}{3}$

(d) $2\frac{4}{5}, 2\frac{4}{13}$

$\frac{14}{5} \times \frac{30}{13}$

$14 \times 13 > 5 \times 30$

$182 > 150$

So $2\frac{4}{5} > 2\frac{4}{13}$

4. (a) $3\frac{1}{5} \square \frac{16}{5}$

$\frac{16}{5} = \frac{16}{5}$

(b) $\frac{5}{13} \square \frac{21}{26}$

$\frac{5\times2}{13\times2} \square \frac{21}{26}$

$\frac{10}{26} \boxed{<} \frac{21}{26}$

(c) $\frac{5}{28} \square \frac{4}{21}$

3	28, 21
7	28, 7
4	4, 1
	1, 1

LCM of 28, 21 $= 3 \times 7 \times 4$

$= 84$

$\frac{5\times3}{28\times3} \square \frac{4\times4}{21\times4}$

$\frac{15}{84} \boxed{<} \frac{16}{84}$

(d) $\frac{12}{3} \square 1\frac{6}{9}$

$\frac{12}{3} \square \frac{15}{9}$

$\frac{12}{3} \square \frac{15\div3}{9\div3}$

$\frac{12}{3} \boxed{>} \frac{5}{3}$

5. $\frac{15}{8}, \frac{25}{6}, 3\frac{7}{10}$

LCM of 8, 6, 10 $\rightarrow 2 \times 2 \times 2 \times 3 \times 5$

$= 120$

2	8, 6, 10
2	4, 3, 5
2	2, 3, 5
3	1, 3, 5
5	1, 1, 5
	1, 1, 1

$\frac{15\times15}{8\times15} = \frac{225}{120}$

$\frac{25\times20}{6\times20} = \frac{500}{120}$

$3\frac{7}{10} = \frac{37}{10} = \frac{37\times12}{10\times12} = \frac{444}{120}$

Arranging in ascending order;

$\frac{225}{120}, \frac{444}{120}, \frac{500}{120}$

Rapid Refresh-4 : **[Page No. 65]**

1. (a) $\frac{4}{17}+\frac{6}{17}+\frac{7}{17}$

$= \frac{4+6+7}{17} = \frac{17}{17} = \frac{1}{1} = 1$

(b) $\frac{3}{42}+\frac{4}{42}+\frac{20}{42}$

$\frac{3+4+20}{42} = \frac{27}{42} = \frac{9}{14}$

(c) $\frac{18}{24}+\frac{22}{24}+\frac{32}{24}$

$\frac{18+22+32}{24} = \frac{72}{24} = \frac{3}{1} = 3$

(d) $\frac{11}{14}-\frac{4}{14} = \frac{11-4}{14} = \frac{7}{14} = \frac{1}{2}$

(e) $\frac{23}{27}-\frac{5}{27} = \frac{23-5}{27} = \frac{18}{27} = \frac{2}{3}$

(f) $\frac{31}{40}-\frac{8}{40} = \frac{31-8}{40} = \frac{23}{40}$

2. (a) $\frac{3}{10}+\frac{7}{12}+\frac{1}{5}$

2	10, 12, 5
2	5, 6, 5
3	5, 3, 5
5	5, 1, 5
	1, 1, 1

LCM of 10, 12, 5 $\rightarrow 2 \times 2 \times 3 \times 5$

$= 60$

$\frac{3}{10} = \frac{3\times6}{10\times6} = \frac{18}{60}$

$\frac{7}{12} = \frac{7\times5}{12\times5} = \frac{35}{60}$

$\frac{1}{5} = \frac{1\times12}{5\times12} = \frac{12}{60}$

$\frac{18}{60}+\frac{35}{60}+\frac{12}{60} = \frac{18+35+12}{60}$

$= \frac{65}{60} = \frac{13}{12} = 1\frac{1}{12}$

(b) $3\frac{1}{3}+1\frac{1}{6}+\frac{1}{8}$

$\frac{10}{3}+\frac{7}{6}+\frac{1}{8}$

2	3, 6, 8
2	3, 3, 4
2	3, 3, 2
3	3, 3, 1
	1, 1, 1

LCM of 3, 6, 8 = 3 × 2 × 2 × 2

= 24

$$\frac{10}{3} = \frac{10\times8}{3\times8} = \frac{80}{24}$$

$$\frac{7}{6} = \frac{7\times4}{6\times4} = \frac{28}{24}$$

$$\frac{1}{8} = \frac{1\times3}{8\times3} = \frac{3}{24}$$

$$\frac{80}{24}+\frac{28}{24}+\frac{3}{24} = \frac{80+28+3}{24}$$

$$= \frac{111}{24} = \frac{37}{8} = 4\frac{5}{8}$$

(c) $\frac{17}{44}-\frac{3}{22}$

$$\frac{3\times2}{22\times2} = \frac{6}{44}$$

$$\frac{17}{44}-\frac{6}{44}$$

$$\frac{17-6}{44} = \frac{11}{44} = \frac{1}{4}$$

(d) $\frac{17}{32}-\frac{20}{48}$

2	32, 48
2	16, 24
2	8, 12
2	4, 6
2	2, 3
3	1, 3
	1, 1

LCM of 32, 48 → 2 × 2 × 2 × 2 × 2 × 3

= 96

$$\frac{17}{32} = \frac{17\times3}{32\times3} = \frac{51}{96}$$

$$\frac{20\times2}{48\times2} = \frac{40}{96}$$

$$\frac{51}{96}-\frac{40}{96}$$

$$= \frac{11}{96}$$

(f) $6\frac{3}{4}+\frac{3}{5}-1\frac{5}{6}$

$$\frac{27}{4}+\frac{3}{5}-\frac{11}{6}$$

2	4, 5, 6
2	2, 5, 3
3	1, 5, 3
5	1, 5, 1
	1, 1, 1

LCM of 4, 5, 6 → 2 × 2 × 3 × 5

= 60

$$\frac{27\times15}{4\times15} = \frac{405}{60}$$

$$\frac{3\times12}{5\times12} = \frac{36}{60}$$

$$\frac{11\times10}{6\times10} = \frac{110}{60}$$

$$\frac{405}{60}+\frac{36}{60}-\frac{110}{60}$$

$$\frac{405+36-110}{60} = \frac{441-110}{60} = \frac{331}{60}$$

$$= 5\frac{31}{60}$$

3. $9\frac{1}{9}-7\frac{1}{6}$

$$= \frac{82}{9}-\frac{43}{6}$$

2	9, 6
3	9, 3
3	3, 1
	1

LCM of 9, 6 → 2 × 3 × 3

$= 18$

$\frac{82\times2}{9\times2} = \frac{164}{18}$

$\frac{43\times3}{6\times3} = \frac{129}{18}$

$= \frac{164}{18} - \frac{129}{18} = \frac{164-129}{18}$

$= \frac{35}{18} = 1\frac{17}{18}$

4. $6\frac{4}{5} - 2\frac{7}{10}$

$\frac{34}{5} - \frac{27}{10}$

2	5, 10
5	5, 5
	1, 1

LCM of $5 \times 2 = 10$

$\frac{34}{5} = \frac{68}{10}$

$\frac{68}{10} - \frac{27}{10}$

$\frac{68-27}{10} = \frac{41}{10}$

$= 4\frac{1}{10}$

5. The cost of notebook $= ₹\ 3\frac{3}{4} = ₹\ \frac{15}{4}$

The cost of pencil $= ₹\ 3\frac{3}{4} - ₹\ 3\frac{1}{4}$

$= ₹\ \frac{15}{4} - \frac{13}{4}$

$= ₹\ \frac{15-13}{4}$

$= ₹\ \frac{2}{4} = ₹\ \frac{1}{2}$

Rapid Refresh-5 : **[Page No. 67]**

1. (a) $\frac{7}{9}\times4$

$\Rightarrow \quad \frac{7}{9}\times\frac{4}{1} = \frac{7\times4}{9\times1}$

$= \frac{28}{9} = 3\frac{1}{9}$

(b) $\frac{1}{2}\times8$

$\frac{1}{2}\times\frac{8}{1} = \frac{1\times8}{2\times1}$

$= \frac{8}{2} = \frac{4}{1} = 4$

(c) $2\frac{3}{7}\times\frac{21}{1}$

$\frac{17}{7}\times\frac{21}{1}$

$\frac{17\times21}{7\times1}$

$= \frac{51}{1} = 51$

(d) $10\frac{1}{10}\times18$

$= \frac{101}{10}\times\frac{18}{1}$

$= \frac{101\times18}{10} = \frac{909}{5}$

$= 181\frac{4}{5}$

(e) $\frac{1}{2}$ of 18

$= \frac{1}{2}\times18$

$\frac{1}{2}\times\frac{18}{1} = \frac{1\times18}{2\times1}$

$= \frac{9}{1} = 9$

(f) $\frac{1}{4}$ of 20

$\frac{1}{4}\times\frac{20}{1}$

$$\frac{1\times5}{1\times1} = 5$$

(g) $\frac{30}{32}\times\frac{8}{5}\times\frac{2}{9}$

$= \frac{1}{3}$

(h) $3\frac{4}{5}\times2\frac{7}{19}\times2\frac{2}{9}$

$\frac{19}{5}\times\frac{45}{19}\times\frac{20}{9}$

$= 20$

2. (a) $\frac{5}{4}$ (b) $\frac{18}{3}$

(c) $2\frac{4}{5}$ (d) 0

3. Cost of 1 litre of milk = $38\frac{3}{5}$

$= \frac{193}{5}$

Cost of $15\frac{1}{2}$ litre of milk = $\frac{193}{5}\times\frac{31}{2}$

$= \frac{5983}{10}$

$= 598\frac{3}{10}$

4. Consumption of milk for one day

$= 4\frac{2}{5}l$

Consumption of milk for September

(for 30 day) = $4\frac{2}{5}\times30l$

$= \frac{22}{5}\times30l$

$= 132\ l$

5. Roji spent $\frac{1}{7}$ of ₹ 490

$\frac{1}{7}$ × ₹ 490

= ₹ 70

Reena spent $\frac{1}{5}$ of ₹ 450

= $\frac{1}{5}$ × ₹ 450

= ₹ 90

Reena spent more and by ₹ (90 – 70) = ₹ 20

Rapid Refresh-6 : **[Page No. 69]**

1. (a) 1

(b) 0 does not have reciprocal

(c) $\frac{11}{3}$

(d) $7\frac{11}{15} = \frac{116}{15}$

□ reciprocal of $\frac{116}{15}$ is $\frac{15}{116}$.

2. (a) $\frac{1}{8} \div \frac{2}{1}$

$\frac{1}{8}\times\frac{1}{2}$

$= \frac{1}{16}$

(b) $\frac{1}{3} \div 4$

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

(c) $\frac{2}{7} \div 6 = \frac{2}{7}\times\frac{1}{6}$

$= \frac{1}{21}$

(d) $\frac{8}{15} \div 12 \Rightarrow \frac{8}{15}\times\frac{1}{12}$

$= \frac{2}{45}$.

(e) $18 \div \frac{1}{3}$

$18 \times \frac{3}{1}$

$= 54$

(f) $50 \div \frac{4}{3}$

$50 \times \frac{3}{4}$

$= \frac{150}{4} = 37\frac{2}{4}$

$= 37\frac{1}{2}$

(g) $25 \div \frac{5}{3}$

$25 \times \frac{3}{5}$

$= 15$

(h) $29 \div \frac{58}{7}$

$29 \times \frac{7}{58}$

$= \frac{7}{2} \Rightarrow 3\frac{1}{2}$

(i) $\frac{2}{5} \div \frac{2}{3}$

$= \frac{2}{5} \times \frac{3}{2}$

$= \frac{3}{5}$

(j) $\frac{7}{8} \div \frac{3}{7}$

$= \frac{7}{8} \times \frac{7}{3}$

$= \frac{49}{24} = 2\frac{1}{24}$

(k) $\frac{1}{9} \div \frac{1}{3}$

$\frac{1}{9} \times \frac{3}{1} = \frac{1}{3}$

(l) $\frac{7}{24} \div \frac{5}{12}$

$\frac{7}{24} \times \frac{12}{5}$

$= \frac{7}{10}$

3. Time period for seven period

$= 5\frac{1}{4} = \frac{21}{4}$

Time period for one period $= \frac{21}{4} \div 7$

$= \frac{21}{4} \times \frac{1}{7}$

$= \frac{3}{4}$

4. length of 56 pieces $= 8\frac{2}{5}$ m

$= \frac{42}{5}$ m

length of 1 piece $= \frac{42}{5} \div 56$

$= \frac{42}{5} \times \frac{1}{56}$

$= \frac{3}{5 \times 4} = \frac{3}{20}$

5. Product of two number $= 2\frac{4}{5}$

$= \frac{14}{5}$

If one number $= 1\frac{1}{6} = \frac{7}{6}$

So the other number $\rightarrow \frac{14}{5} \div \frac{7}{6}$

$\Rightarrow \frac{14}{5} \times \frac{6}{7}$

$= \frac{12}{5} = 2\frac{2}{5}$

Reflect your Skills : **[Page No. 70]**

1. $\frac{5}{6}, \frac{7}{9}$

2	6, 9
3	3, 9
3	1, 3
	1

LCM of 6, 9 = 2 × 3 × 3

= 18

$\frac{5}{6} = \frac{5\times3}{6\times3} = \frac{15}{18}$

$\frac{7}{9} = \frac{7\times2}{9\times2} = \frac{14}{18}$

$\frac{15}{18} > \frac{14}{18}$

So $\frac{5}{6} > \frac{7}{9}$

2. $2\frac{1}{3}m + 3\frac{1}{2}m + 2\left(2\frac{1}{3} + 3\frac{1}{2}\right)m$

$\frac{7}{3}m + \frac{7}{2}m + 2\left(\frac{7}{3} + \frac{7}{2}\right)m$

LCM of 3, 2 = 6

$\frac{7\times2+7\times3}{6}m + 2\left(\frac{7\times2+7\times3}{6}\right)m$

$\frac{14+21}{6}m + 2\left(\frac{14+21}{6}\right)m$

$\frac{35}{6}m + 2\times\frac{35}{6}m$

$\frac{35}{6}m + \frac{70}{6}m$

$= \frac{105}{6}m = \frac{35}{2}m$

3. Total fruits = 60

No. of Apples = $\frac{3}{5}$ × 60

= 36 apples

Rotten Apples = $\frac{1}{3}$ of 36

= $\frac{1}{3}$ × 36

= 12 apples

Number of apples not rotten = 36 – 12

= 24 Apples

4. $2\frac{1}{4} - 1\frac{3}{5}$

$= \frac{9}{4} - \frac{8}{5}$

LCM of 4, 5 = 20

$\frac{9\times5-8\times4}{20} = \frac{45-32}{20}$

$= \frac{13}{20}$

5. $\frac{13}{3} - \frac{15}{4}$

LCM of 3, 4 = 12

$\frac{13\times4-15\times3}{12}$

$= \frac{52-45}{12} = \frac{7}{12}$

6. Ajay ate pizza = $\frac{2}{5}$

Rina ate pizza = $\frac{1}{3}$

Kiran ate pizza = $1-\left(\frac{2}{5}+\frac{1}{3}\right)$

$= 1-\left(\frac{2\times3+1\times5}{15}\right)$

$= 1-\left(\frac{6+5}{15}\right)$

$1-\frac{11}{15}$

$= \frac{15-11}{15} = \frac{4}{15}$

Hence kiran ate the least,

$\frac{2}{5} - \frac{4}{15}$

$\frac{2\times3-4}{15} = \frac{2}{15}$

Hence she ate $\frac{2}{15}$ less than Ajay

$\frac{1}{3} - \frac{4}{15}$

$\frac{5-4}{15} = \frac{1}{15}$

She ate $\frac{1}{15}$ lass than Rina.

7. length of rectangle $= 8\frac{1}{3}\text{cm} = \frac{25}{3}\text{cm}$

Width of rectangle $= 5\frac{3}{4}\text{cm} = \frac{23}{4}\text{cm}$

Area of rectangle = length × breadth

$= \frac{25}{3}\text{cm} \times \frac{23}{4}\text{cm}$

$= \frac{575}{12}\text{cm}$

$= 47\frac{11}{12}\text{cm}^2$

8. Ravi bought sweets $= \frac{2}{3}$ kg

She gave to his friend $= \frac{3}{4}\text{of}\frac{2}{3}\text{kg}$

$= \frac{3}{4} \times \frac{2}{3} = \frac{1}{2}$ kg

Puzzle Time : **[Page No. 70]**

1. Total slices of pizza = 12 slice

Total person including Riya's friend = 4

She kept slices = 3

left slices = 12 – 3 = 9 slices

So each friend get pizza $= \frac{9}{12} \times \frac{1}{3}$

$= \frac{1}{4}$

2. Farmer had apples = 40 kg

He gave apples to the family = $\frac{1}{4}$ of 40 kg

$\Rightarrow \frac{1}{4} \times 40$ kg

= 10 kg.

She sold apples $\rightarrow \frac{3}{8}$ of 40 kg

= 15 kg

Apples he keep for himself = 40 – (10 + 5) kg

= 40 – 25 kg

= 15 kg

□ fraction of Apples he kept for himself

$= \frac{15}{40} = \frac{3}{8}$

Real life Connections : **[Page No. 71]**

1. Sugar needed for one batch of cookies = $\frac{3}{4}$ cup

Sugar needed for three batch of cookies = $3 \times \frac{3}{4}$ cup

$= \frac{9}{4}$ cup

She has sugar = 2 cup

She need more sugar $= \frac{9}{4} - 2$ cup

$= \frac{9-8}{4}$ cup

$= \frac{1}{4}$ cup more sugar

2. Total students = 30 students

Students prefer football $\rightarrow \frac{2}{5} \times 30 = 12$ students

Student prefer basketball = $\frac{1}{3} \times 30 = 10$ students

Students prefer cricket = 30 – (12 + 10) = 30 – 22 = 8 students

Fraction of the students who prefer cricket $= \frac{8}{30} = \frac{4}{15}$

CHAPTER-7
Decimal Numbers

Rapid Refresh-1 **[Page No. 75]**

1. (a) Five Tenths $\Rightarrow \frac{5}{10}$

(b) Three hundredths $\Rightarrow \frac{3}{100}$

(c) eight tenths $\Rightarrow \frac{8}{10}$

2. (a) 34 (b) 506

(c) 12009

3. (a) = (b) >

(c) <

4. 1.5, 1.35, 1.9, 1.55

Converting all the decimal numbers to like decimal

1.50, 1.35, 1.90, 1.55

arranging them in ascending order 1.35, 1.50, 1.55, 1.90

5. The largest number is 2.333

6. (a) $\frac{4}{10} = 0.4$ (b) $\frac{29}{100} = 0.29$

(c) $\frac{7}{1000} = 0.007$

7. (a) $0.5 = \frac{5}{10} = \frac{1}{2}$

(b) $0.125 = \frac{125}{1000} = \frac{1}{8}$

(c) $0.04 = \frac{4}{100} = \frac{1}{25}$

8. (a) 0.75 = 0.75×100%
= 75%

(b) 0.6 0.6×100%
= 60%

(b) 0.02 0.02×100%
= 2%

Rapid Refresh-2 **[Page No. 79]**

1. (a) 4.7 + 3.9 + 14.5

$$\begin{array}{r} 4\ .\ 7 \\ 3\ .\ 9 \\ +14\ .\ 5 \\ \hline 23\ .\ 1 \end{array}$$

Ans is 23.1

(b) 26.75 + 10.25 + 8.6

$$\begin{array}{r} 26\ .\ 75 \\ 10\ .\ 25 \\ +\ 08\ .\ 60 \\ \hline 45\ .\ 60 \end{array}$$

Ans is 45.60

(c) ₹ 35.9 + ₹ 16.04

$$\begin{array}{r} ₹\ 35\ .\ 90 \\ +\ ₹\ 16\ .\ 04 \\ \hline ₹\ 51\ .\ 94 \end{array}$$

(d) 86.5 kg + 42.85 kg

$$\begin{array}{r} 86\ .\ 50\ \text{kg} \\ +\ 42\ .\ 85\ \text{kg} \\ \hline 129\ .\ 34\ \text{kg} \end{array}$$

(e) 30.876 – 2.979 kg

$$\begin{array}{r} 30\ .\ 876 \\ -\ 2\ .\ 979 \\ \hline 27\ .\ 897 \end{array}$$

(f) 45.2 – 3.9567

$$\begin{array}{r} 45\ .\ 2000 \\ +\ 3\ .\ 9567 \\ \hline 41\ .\ 2433 \end{array}$$

1. (a) 7.267 kg – 7 kg

$$\begin{array}{r} 7\ .\ 267\ \text{kg} \\ -7\ .\ 000\ \text{kg} \\ \hline 0\ .\ 267\ \text{kg} \end{array}$$

(b) 0.695 km – 0.199 km

$$\begin{array}{r} 0\ .\ 695 \\ -\ 0\ .\ 199\ \text{km} \\ \hline 0\ .\ 496\ \text{km} \end{array}$$

(c) 19.325 km – 0.273

$$\begin{array}{r} 19\ .\ 325\ \text{km} \\ -\ 0\ .\ 273\ \text{km} \\ \hline 19\ .\ 052\ \text{km} \end{array}$$

(d) ₹ 25.54 – ₹ 0.04

$$\begin{array}{r} ₹\ 25\ .\ 54 \\ -₹\ 0\ .\ 04 \\ \hline ₹\ 25\ .\ 50 \end{array}$$

3. A bag contains rice = 80 kg

another bag contain rice = 15.75 kg

Total weight of rice =

$$\begin{array}{r} 80\ .\ 00\ \text{kg} \\ +\ 15\ .\ 75\ \text{kg} \\ \hline 95\ .\ 75\ \text{kg} \end{array}$$

Hence the total weight rice is 95.75 kg

4. Total weight of three boys = 98.05 kg

Weight of two boys = 36.97 kg

Weight of the third boy =

$$\begin{array}{r} 98\ .\ 05\ \text{kg} \\ -\ 36\ .\ 97\ \text{kg} \\ \hline 61\ .\ 08\ \text{kg} \end{array}$$

Hence the weight of the boy is 61.08 kg.

5. (a) 42.6×5 = 213.0

(b) 92.06 × 7 = 644.42

(c) 3.7×1.7 = 6.29

(d) 2000.5×2.1 = 4201.05

(e) 23.08×10 = 230.8

(f) 341.562×10 = 3415.62

6. (a) 0.48 (b) 1

(c) 0 (d) 39.85

(e) 5.9,8.65 (f) 11.11

Rapid Refresh-3 **[Page No. 83]**

1. (a) 3.752 ÷ 4

$$\begin{array}{r} 0.938 \\ 4\overline{)3.752} \\ -36\downarrow\ \ \ \\ \hline 15\ \ \\ -12\downarrow \\ \hline 32 \\ 32 \\ \hline 0 \end{array}$$

Hence the Quotient is 0.938

(b) 0.9855 ÷ 5

$$\begin{array}{r} 0.1971 \\ 5\overline{)0.9855} \\ -5\downarrow\ \ \ \\ \hline 48\ \ \\ -45\downarrow \\ \hline 35 \\ -35\downarrow \\ \hline 05 \\ -5 \\ \hline 0 \end{array}$$

The Quotient is 0.1971

(c) 635.4 ÷ 10

$$\begin{array}{r} 63.54 \\ 10\overline{)635.4} \\ -60\downarrow\ \ \ \\ \hline 35\ \ \\ -30\downarrow \\ \hline 54 \\ -50 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

The Quotient is 63.54

(d) 0.0566 ÷ 10

$$\begin{array}{r} 0.00566 \\ 10\overline{)0.0566} \\ 0\downarrow\ \ \ \\ \hline 0\ \ \\ 0\downarrow \\ \hline 056 \\ -50 \\ \hline 66 \\ -60 \\ \hline 60 \\ -60 \\ \hline 0 \end{array}$$

The Quotient is 0.00566

(e) 354.56 ÷ 100

$$\begin{array}{r} 3.5456 \\ 100\overline{)354.56} \\ 300\downarrow\ \ \ \\ \hline 545\ \ \\ -500\downarrow \\ \hline 456 \\ -400 \\ \hline 560 \\ -560 \\ \hline 600 \\ -600 \\ \hline 0 \end{array}$$

The Quotient is 3.5456

(f) 10.825 ÷ 2.5

$$\frac{10825\times10}{25\times1000} = \frac{10825}{2500}$$

$$\begin{array}{r} 4.33 \\ 2500\overline{)10825}(\\ -10000 \\ \hline 8250 \\ -7500 \\ \hline 7500 \\ -7500 \\ \hline 0 \end{array}$$

The Quotient is 4.33

(g) $10.199 \div 4.7$

$$\frac{10199 \times 10}{47 \times 1000} = \frac{10199}{4700}$$

$$\begin{array}{r} 2.17 \\ 4700\overline{)10199}(\\ -9400 \\ \hline 7990 \\ -4700 \\ \hline 32900 \\ -32900 \\ \hline 0 \end{array}$$

The Quotient is 2.17

(h) $11.47 \div 0.0031$

$$\frac{1147 \times 10000}{00031 \times 10} = \frac{114700}{31}$$

$$\begin{array}{r} 3700 \\ 31\overline{)114700}(\\ -93\downarrow \\ \hline 217 \\ -217\downarrow \\ \hline 00 \\ -0\downarrow \\ \hline 00 \\ -00 \\ \hline 0 \end{array}$$

The Quotient is 3700

2. (a) $(3.05 + 1.05) \div 0.5$

$$\frac{410 \times 10}{05 \times 100} = \frac{41}{5} = 8.2$$

(b) $5.4 \times 7.6 \div 18$

$$\frac{54 \times 76}{18 \times 10 \times 10} = \frac{228}{100} = 2.28$$

(c) $0.35 \div (1.75 \times 40)$

$$\frac{0 \times 35}{1.75 \times 40} = \frac{1}{200}$$

$$\begin{array}{r} 0.005 \\ 200\overline{)1000}(\\ -1000 \\ \hline 0 \end{array}$$

$$\frac{1}{200} = 0.005$$

3. (a) 1 (b) 20.01

(c) 1

4. distance cover in 1 *l* of petrol

= 19.5 km

distance cover in 25.5 *l* of petrol

= 19.5 ×25.5

= 438.75 km

$$\begin{array}{r} 19.5 \\ \times 22.5 \\ \hline 975 \\ 390\times \\ 390\times\times \\ \hline 438.75 \end{array}$$

5. Cost of 16.5 *l* of refined oil = ₹ 1150.05

Cost of 1 *l* of refined oil

= ₹ 1150.05 ÷ 16.5

= ₹ 69.7

$$= \frac{115005 \times 10}{165 \times 100} = \frac{115005}{1650}$$

$$\begin{array}{r} 69.7 \\ 1650\overline{)115005}(\\ -9900\downarrow \\ \hline 16005 \\ -14850 \\ \hline 11550 \\ -11550 \\ \hline 0 \end{array}$$

Reflect your Skills **[Page No. 83]**

Connect your concept

1. If a number is multiplied by 100, the result is 523.89.

So the actual number is 523.89 ÷ 100

= 5.2389

Subtracting 3.14 from the number =

$$\begin{array}{r} 5\ .\ 2389 \\ -\ 3\ .\ 1400 \\ \hline 2\ .\ 0989 \end{array}$$

2. 1 km = 1000 m

3.456 km = 3.456 × 1000 m

= 3456 m

Adding 125.34 m to 3456 m we get,

$$\begin{array}{r} 3456\ .\ 00\ \text{m} \\ +\ 125\ .\ 34\ \text{m} \\ \hline 3581\ .\ 34\ \text{m} \end{array}$$

3. Total money in the wallet = ₹ 657.75

Money spent on books and pen =

$$\begin{array}{r} ₹\ 245\ .\ 90 \\ +\ ₹\ 65\ .\ 80 \\ \hline ₹\ 311\ .\ 70 \end{array}$$

Money left =

$$\begin{array}{r} ₹\ 657\ .\ 75 \\ -\ ₹\ 311\ .\ 70 \\ \hline ₹\ 346\ .\ 05 \end{array}$$

Money another packet = ₹ 10.25

Total amount of money left =

$$\begin{array}{r} ₹\ 346\ .\ 05 \\ -\ ₹\ 10\ .\ 25 \\ \hline ₹\ 356\ .\ 30 \end{array}$$

4. Water is tank = 65.5 *l*

Water used = 18.75 *l*

Water left in the Tank =

$$\begin{array}{r} 65\ .\ 50\ l \\ -\ 18\ .\ 75\ l \\ \hline 46\ .\ 75\ l \end{array}$$

Water added in the tank = 22.5 *l*

Total water in the tank →

$$\begin{array}{r} 46\ .\ 75\ l \\ +\ 22\ .\ 50\ l \\ \hline 69\ .\ 25\ l \end{array}$$

5. 12.45 × 3.6

$$\begin{array}{rrrrr} & 1 & 2\ . & 4 & 5 \\ & & \times & 3\ . & 6 \\ \hline & 7 & 4 & 7 & 0 \\ 3 & 7 & 3 & 5 & \times \\ \hline 4 & 4\ . & 8 & 2 & 0 \end{array}$$

If the result is increased by 50.05 then

$$\begin{array}{r} 44\ .\ 820 \\ +\ 50\ .\ 050 \\ \hline 94\ .\ 870 \end{array}$$

6. 1 kg = 1000g

45.67 kg = 45.67 × 1000 g

= 45670 g.

subtracting 1234 g from the result;

$$\begin{array}{rrrrrr} 4 & 5 & 6 & 7 & 0 & g \\ -\ 1 & 2 & 3 & 4 & g & \\ \hline 4 & 4 & 4 & 3 & 6 & g \end{array}$$

Hence the remaining weight is 44436g.

7. Cost of 1 kg of rice = ₹ 48.25

Cost of 5.75 kg of rice = ₹ 48.25 × 5.75

$$\begin{array}{rrrrrrr} & & & 4 & 8\ . & 2 & 5 \\ & & & \times & 5\ . & 7 & 5 \\ \hline & & 2 & 4 & 1 & 2 & 5 \\ & 3 & 3 & 7 & 7 & 5 & \times \\ 2 & 4 & 1 & 2 & 5 & \times & \times \\ \hline 2 & 7 & 7\ . & 4 & 3 & 7 & 5 \end{array}$$

Hence cost of 5.75 kg of rice

= ₹ 277.4375

= ₹ 277.44

Money given to the shopkeeper = ₹ 300

Change the customer will get back =

$$\begin{array}{r} ₹\ 300\ .\ 00 \\ -\ ₹\ 277\ .\ 44 \\ \hline ₹\ 22\ .\ 56 \end{array}$$

Puzzle time [Page No. 84]

1. The cost of three item =

$$\begin{array}{r} ₹\ 25\ .\ 50 \\ ₹\ 18\ .\ 75 \\ +\ ₹\ 9\ .\ 90 \\ \hline ₹\ 54\ .\ 15 \end{array}$$

Ravi give money to the cashier → ₹ 100

Money he get back =

$$\begin{array}{r} ₹\ 100\ .\ 00 \\ -\ ₹\ 54\ .\ 15 \\ \hline ₹\ 45\ .\ 85 \end{array}$$

2. Meena need lemon juice = 1.5 *l*

Meena has lemon juice = 0.65 *l*

She need juice to reach her goal =

$$\begin{array}{r} 1\ .\ 50\ l \\ -\ 0\ .\ 65\ l \\ \hline 0\ .\ 85\ l \end{array}$$

Hence She need 0.85 *l* of juice

3. Rohan ran distance = 2.75 km

Sita ran distance = 3.50 km

Veer ran distance = + 2.25 km

Total distance covered = 8.50 km

by three

goal to cover distance = 10 km

distance left =

$$\begin{array}{r} 10\ .\ 00\ \text{km} \\ -\ 8\ .\ 50\ \text{km} \\ \hline 1\ .\ 50\ \text{km} \end{array}$$

Hence 1.50 km distance is left to cover.

Real life Connections[Page No. 84]

1. Total cost of apple = 1.75 km × ₹ 60

= ₹ 105.00

Total cost of bananas = 0.85 kg × ₹ 40

= ₹ 34.00

Total cost of oranges = 2.5 kg × ₹ 50

= ₹ 125.0

Rohit spent on fruits → ₹ 105 + ₹ 34 + ₹ 125

= ₹ 264

2. Capacity of water Tank = 250.00 *l*

Water in Tank = –123.75 *l*

Water needed to fill the tank = 126.25 *l*

1 bucket hold water = 5.5 *l*

no. of buckets required to fill the tank

$$= \frac{126.25\ l}{5.5\ l}$$

= 22.95

= 23

Hands On activity [Page No. 84]

Do it yourself

CHAPTER-8
Basic Geometrical Concepts

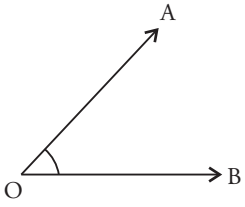
Rapid Refresh-1

1. 360°

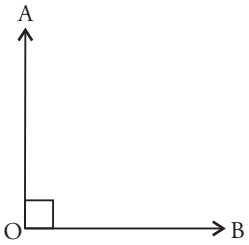
2. No–

3. Protractor, degree (°)

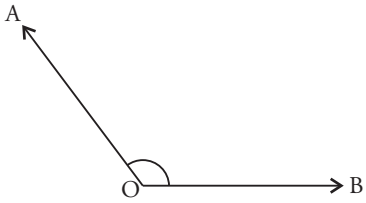
4.



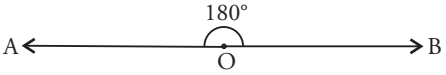
Acute angle



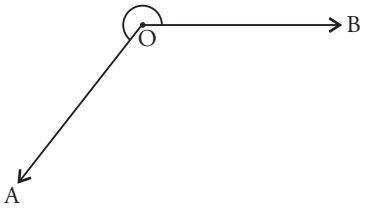
Right angle



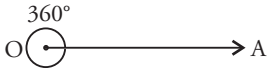
Obtuse angle



Straight angle

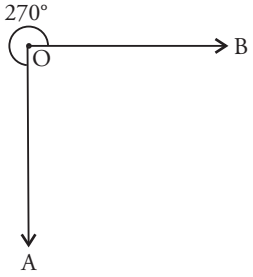


Reflex angle



Complete angle

5. 270°



6. Complete Angle

7. (a) Acute Angle (b) obtuse Angle
(c) Reflex Angle (d) Straight Angle

8. (a) Straight Angel
(b) obtuse Angle
(c) Right Angle

Rapid Refresh–2 **[Page No. 92]**

1. (a) Three (b) Three
(c) Three

2. (a) Scalene Triangle
(b) Scalene Triangle
(c) Isosceles Triangle

3. (a) Right Angle Triangle
(b) Obtuse Angle Triangle
(c) Obtuse Angle Triangle

4. (a) In ΔABC;

$$\angle A + \angle B + \angle C = 180^o$$
$$46^o + 66^o + \angle C = 180^o$$
$$\angle C = 180^o - (46^o + 66^o)$$
$$\angle C = 180^o - 112^o$$
$$\angle C = 68^o$$

Hence $\angle C = 68^o$

(b) In ΔPQR;

$$\angle PQR + \angle PRQ + \angle QPR = 180^o$$
$$116^o + 31^o + \angle QPR = 180^o$$
$$\angle QPR = 180^o - (116^o + 31^o)$$
$$= 180^o - 147^o$$
$$= 33^o$$

Hence $\angle QPR = 33^o$

(c) In ΔABC;

$$\angle A + \angle B + \angle C = 180^o$$
$$70^o + 70^o + \angle C = 180^o$$
$$140 + \angle C = 180^o$$
$$\angle C = 180^o - 140^o$$
$$\angle C = 40^o$$

Hence $\angle C = 40^o$

(d) In ΔABC;

$$\angle A = \angle B = x$$
$$\angle A + \angle B + \angle C = 180^o$$
$$x + x + 90 = 180^o$$
$$2x + 90^o = 180^o$$
$$2x = 180^o - 90^o$$
$$2x = 90^o$$
$$x = \frac{90^\circ}{2}$$
$$x = 45^o$$

Hence $\angle A = \angle B = x = 45^o$

5. (a) $\angle PQR + \angle QRP + \angle RPQ = 180^o$
$\angle PQR + 90^o + 45^o = 180^o$
$\angle PQR + 135^o = 180^o$
$\angle PQR = 180^o - 135^o$
$\angle PQR = 45^o$

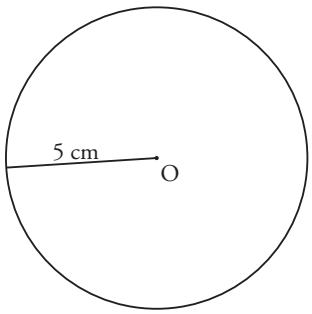
(b) $\angle M + \angle L + \angle N = 180^o$
$81^o + 45^o + \angle N = 180^o$
$126^o + \angle N = 180^o$
$\angle N = 180^o$
$\angle N = 180^o - 126^o$
$= 54^o$

(c) $\angle ABC + \angle BAC + \angle BCA = 180^o$
$\angle ABC + 25^o + 30^o = 180^o$
$\angle ABC + 55^o = 180^o$
$\angle ABC = 25^o$

6. (a) Triangle is not possible
(b) Triangle is not possible
(c) Triangle is possible

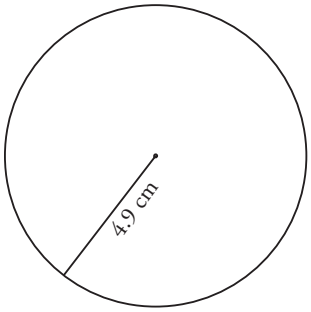
Rapid Refresh–3 **[Page No. 95]**

1. (a)



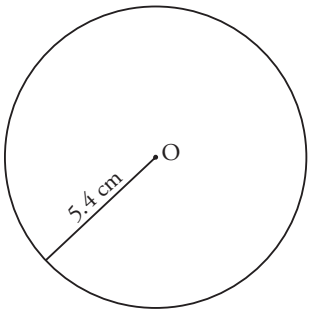
Radius = 5 cm

(b)



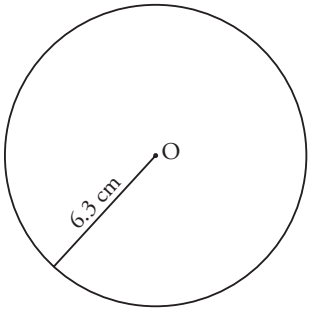
Radius = 4.9 cm

(c)



Radius = 5.4 cm

(d)



Radius = 6.3 cm

2. (a) r = 12.8 cm

d = 2r = 2 × 12.8 cm = 25.6 cm

(b) r = 9 mm

$d = 2r = 2 \times 9$ mm = 18 mm

(c) r = 14 cm

$d = 2r = 2 \times 14$ cm = 28 cm.

3. (a) d = 26 m

$$r = \frac{d}{2}$$

$$= \frac{26\text{m}}{2} = 13 \text{ m}$$

(b) d = 68 cm

$$r = \frac{d}{2}$$

$$= \frac{68\text{cm}}{2} = 34 \text{ cm}$$

(c) d = 15.4 cm

$$r = \frac{d}{2}$$

$$= \frac{15.4\text{cm}}{2} \text{ cm} = 7.7 \text{ cm}$$

3. (a) Circumference $= 2\pi r$

d = 7 cm

$$r = \frac{7}{2} \text{ cm}$$

Circumference $= 2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{7}{2} \text{ cm}$$

= 77 cm

(d) diameter = 8.4 cm

$$r = \frac{d}{2} = \frac{8.4}{2} \text{ cm}$$

Circumference $= 2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{8.4}{2} \text{ cm}$$

= 26.4 cm

(c) diameter = 6.3 cm

$$r = \frac{d}{2} = \frac{6.3}{2} \text{ cm}$$

Circumference $= 2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{6.3}{2} \text{ cm}$$

= 19.8 cm

5. (a) Circumference $2\pi r$ = 6.6 m

$$2 \times \frac{22}{7} \times r = 6.6 \text{ m}$$

$$r = \frac{6.6 \times 7}{2 \times 22 \times 10}$$

$$= \frac{21}{20} = 1.05 \text{ m}$$

(b) $2\pi r$ = 8.8 cm

$$r = \frac{8.8\text{cm}}{2 \times \pi}$$

$$= \frac{88 \text{ cm} \times 7}{2 \times 22 \times 10}$$

$= \frac{14}{10}$ cm = 1.4 cm

(c) $2\pi r$ = 220 cm

$r = \frac{220\text{cm}}{2\times\pi}$

$= \frac{220\times 7\text{cm}}{2\times 22}$

= 35 cm

6. (a) $2\pi r$ = 6.6 cm

$r = \frac{6.6}{2\times\pi}$ cm

$= \frac{66\times 7}{2\times 22\times 10}$

$= \frac{21}{2\times 10}$ cm

$d = 2r$

$= 2 \times \frac{21}{2\times 10}$ cm

= 2.1 cm

(b) $2\pi r$ = 1.32 cm

$r = \frac{21}{2\times\pi}$ cm

$d = 2r$

$= \frac{2\times 1.32}{2\times\pi}$

$= \frac{2\times 132\times 7}{2\times 22\times 10}$ cm

$= \frac{42}{10}$ cm = 4.2 cm

(c) $2\pi r$ = 3.3 cm

$r = \frac{3.3}{2\pi}$ cm

d $= 2r$

$= 2 \times \frac{3.3}{2\pi}$ cm

$= \frac{33\times 7}{22\times 10}$ cm

$= \frac{21}{20}$ cm = 1.05 cm.

Rapid Refresh-4 **[Page No. 97]**

1. (a) ∠P, ∠Q, ∠R, ∠S

(b) PQ, QR, RS, SP

2. (a) Rhombus (b) Rectangle

(c) Square

3. Rhombus— Rhombus is a Quadrilateral with parallel opposite sides and In Rhombus apposite angles are equal.

Square— Square is a quadrilateral with all equal sides and all the angles are 90° in Square.

Reflect your skills

Connect Your Concept **[Page No. 98]**

1. ∠1 + ∠2 + ∠3 = 180°

90° + 35° + ∠3 = 180°

125° + ∠3 = 180°

∠3 = 180°–125°

∠3 = 55°

Hence the third angle is 55°

On the basis of angle the triangle is Right angle triangle.

2. In a right angle triangle ∠1 = 35°, ∠2 = 90°

Hence the third angle is

∠1 + ∠2 + ∠3 = 180°

35° + 90° + ∠3 = 180°

125° + ∠3 = 180°

∠3 = 180°–125°

∠3 = 55°

3. AB = 12 cm

If c is the midpoint of AB then.

AC = CB = $\frac{12}{2}$ cm = 6 cm

If D is the midpoint of AC.

AD = DC = $\frac{6}{2}$ cm = 3 cm

4. Sum of angles of quadrilateral is 360°

∠1 + ∠2 + ∠3 + ∠4 = 360°

85° + 95° + 110° +∠4 = 360°

290° + ∠4 = 360°

∠4 = 360°–290°

= 70°

The quadrilateral is irregular Quadrilateral

5. This angle is an obtuse angle.

No they will not from a straight angle because on extending the rays further the angle is not getting increased only the length of rays are getting increased.

6. If all the angle and all the sides are equal, the triangle is equilateral triangle.

The perimeter = 24 cm

AB + BC + CA = 24 cm

$x + x + x$ = 24 cm

$3x$ = 24 cm

x = 8 cm

Each angle will measure 60° in equilateral triangle.

7. Side of Square = 15 cm

Perimeter of Square = 4 × 15 cm

= 60 cm

∴ Perimeter of square = Perimeter of rectangle

and let width = x

length = x + 5 cm

Perimeter of square = 2(l + b)

$= 2(x + 5 + x) = 60$

$= 2x + 5 = \frac{60}{2} = 30$

$= 2x = 30 - 5$

$2x = 25$

$x = \frac{25}{2} = 12.5$ cm

Hence width of rectangle = 12.5 cm

Length of rectangle = x +5 cm

= 12.5 + 5 cm

= 17.5 cm

8. In parallelogram, the ratio of angle is 3:2

lets one angle is $3x$

others angle is $2x$

$3x + 2x + 3x + 2x = 360°$

$10x = 360°$

$x = 36°$

Hence the angles are $3x = 3 \times 36° = 180°$

$2x = 2 \times 36° = 72°$

If one angle is increased by 10 then others angle will be decreased by 10 to maintain the properties of a parallelogram.

Puzzle time [Page No. 84]

1. Let the first angle be $2x$

Second angle be $3x$

third angle be $4x$

Then

$\angle 1 + \angle 2 + \angle 3 + \angle 4 = 180°$

$2x + 3x + 4x = 180°$

$9x = 180°$

$x = \frac{180°}{9} = 20°$

Hence the angles are $\angle A = 2 \times 20 = 40°$

$\angle B = 3 \times 20 = 60°$

$\angle C = 4 \times 20 = 80°$

2. In right angled triangle $\angle B = 45°$

So one of the other two angle is $\angle A = 90°$

Hence the third angle is $\angle C$ = ?

$\angle A + \angle B + \angle C = 180°$

$90° + 45° + \angle C = 180°$

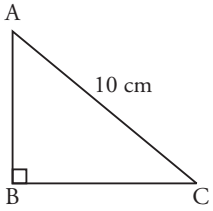
$135° + \angle C = 180°$

$\angle C = 180° - 135°$

$\angle C = 45°$

Hence the third angle is 45°

Yes the triangle is isosceles as two angles of triangle are equal then the two sides of the triangle are also equal.



∴ this triangle is isosceles and right angled triangle, and AB = AC

$AB^2 + BC^2 = AC^2$

$AB^2 + AB^2 = AC^2$

$2AB^2 = AC^2$

$AB^2 = (10 \text{ cm})^2$

$AB^2 = 100 \text{ cm}^2$

$AB = \sqrt{100\text{cm}}$

AB = 10 cm

Hence the other two sides of the triangle are 10 cm each.

Real life connections [Page No. 99]

1. Two angle in the window are $\angle A = 65°$, $\angle B = 45°$

Hence third angle $\angle C$ = ?

$\angle A + \angle B + \angle C = 180°$

$65° + 45° + \angle C = 180°$

$110° + \angle C = 180°$

$\angle C = 180° - 110°$

$\angle C = 70^o$

Cost of building frame = ₹ 250 per-degree of angle

Total cost= 180 × ₹ 250

= ₹ 45,000

2. Radius of garden = 4.2 cm

Circumference of garden = $2\pi r$

$= 2 \times \frac{22}{7} \times \frac{42}{10}$ cm

$= \frac{264}{10}$ cm = 26.4 cm

Hence length of fencing around the garden is 28.4 m

Cost 1 m fencing = ₹ 150

Cost of 26.4 m fencing= ₹ 150 × 26.4

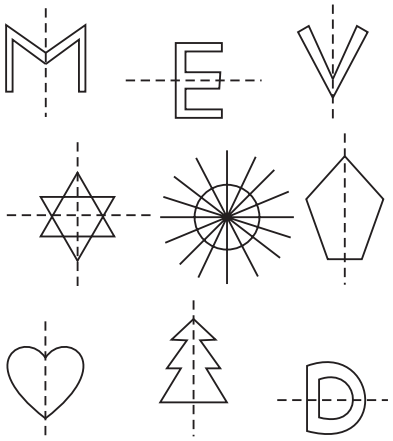
= ₹ 3960.0

CHAPTER-9

Symmetry and patterns

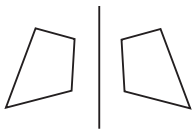
Rapid Refresh-1 **[Page No. 103]**

1.

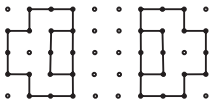


2. P, Q, R, S

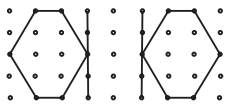
3.



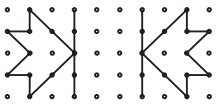
4. (a)



(b)

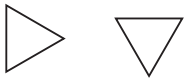


(c)

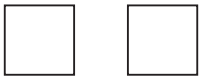


5. Rhombus has rotational symmetry

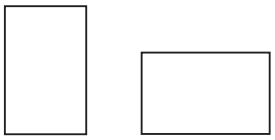
6. (a)



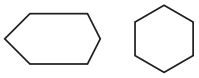
(b)



(c)



(d)



(i) a, c, d do not look same on $\frac{1}{4}$ turn

(ii) a will not look same on $\frac{1}{2}$ turn

Rapid Refresh-2 **[Page No. 106]**

1.

2.

3. (a) $3\frac{1}{2}$ 3 $2\frac{1}{2}$ 2 $1\frac{1}{2}$ 1

(b) 990 99 9.9 .99 .099 .0099

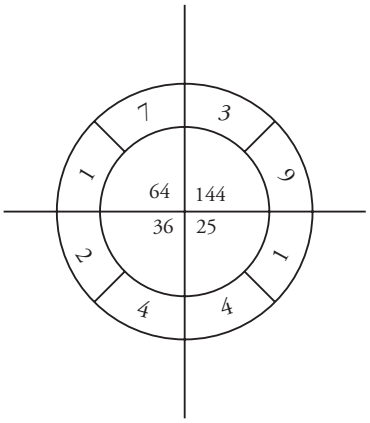
4. (a) 2025 (b) 3025

(c) 4225 (d) 7225

5. (a)

(22)	29	6	13	20
28	(10)	(12)	19	(21)
9	11	18	25	27
15	17	24	26	(8)
16	(23)	30	7	14

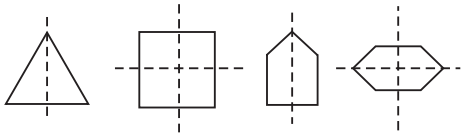
(b)



Reflect your skills

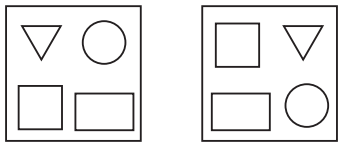
Connect Your Concept [Page No. 107]

1.



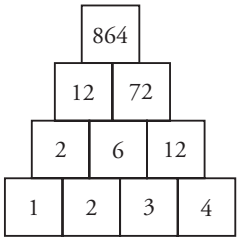
2. (b) does not have rotational symmetry

3.

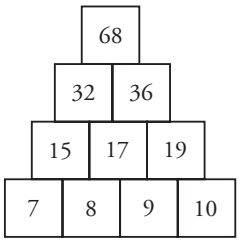


4. (a) 27, 32 (b) 50, 60

5. (a)



(b)



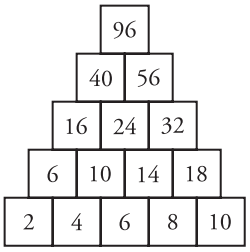
6.

Puzzle time [Page No. 108]

1. The shape is kite that has 4 lines of symmetry but no rotational symmetry.

The shape is of rectangle

2.



Hence the topmost number is 96

Real Life Connections [Page No. 108]

1. The architect can use 5 lines of symmetry to place the fountain.

If the park were designed as a hexagon then it will have 6 lines of symmetry.

CHAPTER-10
Time

Rapid Refresh-1 [Page No. 111]

1. (a) 6:45 a.m. (b) 1:15 a.m.
(c) 00:45 a.m. (d) 2:30 p.m.
(e) 12:15 p.m. (f) 6:35 p.m.
(g) 10:30 p.m. (d) 12:00 midnight

2. (a) 0430 (b) 1045
(c) 0105 (d) 0250
(e) 1245 (f) 1725
(g) 2125 (d) 0020

Rapid Refresh-2 [Page No. 113]

1. Rohan's family went on picnic at 8:30 a.m.

Rohan's family returned at 5:15 p.m.

Total time for which picnic last –?

Calculating time from 8:30 to 12:00 noon.

It is 3 hours 30 minutes

Calculating time for 12:00 noon to 5:15 p.m.

It is 5 hours 15 minutes

Total time =

	3 hr	30 min
+	5 hr	15 min
	8 hr	45 min

Hence the picnic last for 8 hours 45 minutes

2. Priya travelled the distance in 4 hr 30min
Sia cover the distances in –3hr 45min
difference between both time 00 45 min
Hence Priya take 45 more to cover the same distance.

3. Car-1 cover the distance. in = 2 hr 20 min
Car-2 cover the distance in = 1 hr 50 min
Total time taken by both of the cars
= 3 hr 70 min
3 hr 70 min
3 hr + 60 min + 10 min
4 hr 10 min
Hence total taken by both of the cars to reach is 4 hours 10 minutes.

Reflect your skills

Connect you Concepts [Page No. 113]

1. Ravi started the at 7:40 p.m.
= 19 hr 40 min
he complete his work in 1 hr 35 min
Ravi finish his work at 20 hr 75 min
= 21hr 15 min

2. A bus leaves at 8:00 a.m. and reaches its destination at 3:45 p.m
Calculating time from 8:00 a.m to 12:00 noon. It is 4 hr 00 min
time from 12:00 noon to 3:45 p.m is 3hr 45 min
Total time taken by bus = 4 hr 00 min
+ 3 hr 45 min
7 hr 45 min

3. A movie starts at 3:30 p.m.
= 15 hr 30 min
movie run time is = 2 hr 45 min
break time = 00 hr 15 min
The movie end at = 17 hr 90 min
= 18 hr 30 min
Converting it into 12 hours format
18 hr 30 min = 6:30 p.m.

4. A train depart from station A at 11:15 a.m.
= 16 hr 15 min
it arriver station B at 4:30 p.m.
= 16 hr 30 min,
Total duration of the journey
= 16 hr 30 min
– 11 hr 15 min
5 hr 15 min
Hence total duration of the journey is 5 hr 15 minute

5. Raj's flight takes off at 11:20 p.m.
23 hr 20 min
and lands at 5:10 a.m = 5hr 10 min
Time from 23 hr 20 min to 24:00 midnight is = 40 min
Time from 0000 to 0510 is 5 hr 10 min
Total time taken by the Raj's flight =
5 hr 10 min
+ 40 min
5 hr 50 min

6. The school function starts at 9:15 a.m and ends at 1:30 p.m.
Lunch break is of 30 minutes
Calculating time from 9:15 a.m to 12:00 noon is ∴

	hr	min
	12	00
–	9	15
	2 hr	45 min

Time from 12 : 00 to 1 : 30 pm = 1 hr 30 minute
Total time is

	hr	minute
	2	45
+	1	30
	3 hr	75 min

3 hr 75 min = 4 hr 15 min
Time school function last excluding break.

	4 hr	15 min
–		30 min
	3 hr	45 min

7. Total time from stop A to stop C.

			hr	min
10:30 a.m	⇒		10	30
– 7:45 a.m		–	7	45
			2	45

Hence total time stop A to stop C = 2 hr 45 min
Time taken by bus from stop A to Stop C

		hr	min
10:30 a.m	⇒	10	30
– 9:10 a.m	–	9	10
		1	20

Hence time taken by bus from stop B to stop C = 1 hr 20 min

Puzzle time [Page No. 114]

1. A movie starts 3:45 p.m = 15 hr 45 min
It runs for = 2 hr 35 min
break time is of ⇒ 15 min
Short film last for ⇒ + 45 min
17hr 140 min
= 19 hr 20 min
Hence short film ends at = 7:20 p.m

2. The train leaves the station at 10:15 a.m
= 10 hr 15 min
time taken to reach first shop
= 1 hr 25 min
If then it stop = 10 min
The train again travel for = + 2 hr 10 min
The train reach the second stop at
= 13 hr 60 min
= 14 hrs
Hence the train reach at the school stop at 2:00 p.m

Real life Connection [Page No. 114]

Do it yourself.

Hands on activity [Page No. 114]

Do it yourself.

CHAPTER-11
Measurement

Rapid Refresh-1 [Page No. 117]

1. (a) 1 km = 10 hm
9 km = 9 × 10 hm
= 90nm
(b) 1 km = 10000 dm
15 km = 15 × 10000 dm
= 1,50,000 dm
(c) 1 dam = 10000 mm
38 dam = 38 × 10000 mm
= 3,80,000 mm

2. (a) 1 cm = $\frac{1}{100}$ m

24 cm = $\frac{24}{100}$ m

= 0.24 m

(b) 1 cm = $\frac{1}{100000}$ km

7840 = $\frac{7840}{100000}$ km

= 0.07840 km.

(c) 1 mm = $\frac{1}{10000}$ dam

9200 mm = $\frac{9200}{10000}$ dam

= 0.92 dam.

3. (a) 1 kg = 1000 g
65 kg = 65 × 1000 g
= 65,000g
(b) 1 dag = 100 dg
19 dag = 19 × 100 dg
= 1,900 dg
(c) 1 g = 1000 mg
57 g = 57 × 1000 mg
= 57,000 mg

4. (a) 1 dag = $\frac{1}{10}$ kg

980 dag = $\frac{980}{10}$ g

= 98 g

(b) 1 g = $\frac{1}{1000}$ kg

620 g = $\frac{620}{1000}$ kg

= 0.620 kg

(c) 1 dg = $\frac{1}{1000}$ hg

12,345 dg $= \frac{12,345}{1000}$ hg

$= 12.345$ hg

5. (a) 1 cl $= \frac{1}{1000}$ dal

8560 cl $= \frac{8560}{1000}$ dal

$= 8.56$ dal

(b) 1 l $= \frac{1}{1000}$ kl

7000 l $= \frac{7000}{1000}$ kl

$= 7$ kl

(c) 1 cl $= \frac{1}{100}$ l

85 cl $= \frac{85}{100}$ l

$= 0.85$ l

Rapid Refresh-2 **[Page No. 119]**

1. (a)

	kg	g
	45	300
	32	750
+	7	600
	85	650

Answer is 85 kg 650 g

(b)

	kg	g
	210	850
	140	125
+	50	350
	401	325

Answer is 401 kg 325 g

(c)

	kg	g
	520	450
	180	275
+	95	700
	796	425

Answer is 796 kg 425 g

2. (a)

	L	ml
	3	850
+	2	600
	6	450

(b)

	L	ml
	50	700
–	38	450
	12	250

(c)

	L	ml
	8	500
–	6	150
	2	350

3. (a)

	m	cm
	12	23
×		14
	171	22

171 m + 22 cm.

171 m + $\frac{22}{100}$ m

171 m + 0.22 m

171.22m

(b) 5 l 237 ml

= 5237 ml.

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

1ml $= \frac{1}{1000}$

167584 ml $= \frac{167584}{1000}$ l

$= 167.584$ l

4. (a) 100 kg 50 g

$\therefore 1 \text{ g} = \frac{1}{1000} \text{ kg}$

$50 \text{ g} = \frac{50}{1000} \text{ kg} = 0.050 \text{ kg}$

100.050 kg

```
      5 . 0 0 2 5
20) 1 0 0 . 0 5 0 (
   −1 0 0
   ---------
       0 0 5 0
        −4 0
       -------
         1 0 0
        −1 0 0
       -------
             0
```

Hence 100 kg 50g ÷ 20
= 5.0025 kg

(b) 2109 g ÷ 3

```
   7 0 3
3) 2 1 0 9 (
   2 1↓
   -----
       0
       0↓
   -----
        9
       −9
   -----
        0
```

Hence 2109 g ÷ 3 = 703 g

Rapid Refresh-3 **[Page No. 120]**

	kg g
1. A fruit shop owners had apples	= 56 400
he purchased apples	= 18 250
Total weight of apples in the shop	74 650

Hence total weight of apples in shop is 74 kg 650 g.

2. distance between. house and store
= 150 m
distance from store to another park
= 175 m
distance from house to park
= 150 m + 175 m
= 325 m.
distance from park to the house
= 325 m.
Total distance he walk altogether
= 325 m
325 m
650 m

Hence total distance walked by Rakesh is 650 m

3. A car travel distance in a day = 635.48 km
Car travel distance in 18 days
= 635.48 km × 18
= 11438.64 km.

```
        6  3  5  .  4  8
                 ×  1  8
   ---------------------
        5  0  8  3  8  4
        6  3  5  4  8  ×
   ---------------------
     1  1  4  3  8. 6  4
```

4. A petrol pump sold petrol

	L	ml
	10	250
	8	100
	12	500
Total Quantity of petrol sold =	30	850

Hence total Quantity of petrol sold by petrol pump is 30L 850 ml.

5. Milk supplied to each booth
= 525.75 l
Milk supplied to 112 milk booths
= 525.75 l × 11
= 58884.00 l

```
           5  2  5.  7  5
              ×  1  1  2
   ----------------------
        1  0  5  1  5  0
        5  2  5  7  5  ×
  +  5  2  5  7  5  ×  ×
   ----------------------
     5  8  8  8  4.  0  0
```

6. A can contains kerosene = 12 l 350 ml
= 12.350 l
Kerosene poured into 7 bottles
Each bottle hold kerosene
= 12.350 l ÷ 7
= 1.7642 l
= 1 L 764 mL

```
     1.7642
  7)12.350(
    -7
     53
    -49
      45
     -42
       30
      -28
        20
       -14
         6
```

Reflect your skills

Connect your Concepts [Page No. 121]

1. Total length of rope = 12.5 m

Rape cut into number of pieces = 5 pieces.

length of each piece = 12.5 ÷ 5

= 2.5 m

```
     2.5
  5)12.5(
    -10
      25
     -25
       0
```

If 2 m is cut from one piece then the new length of that piece is 2.5m – 2m

= 0.5m

2. Rina bought apples = 3.5 kg.

Rina bought bananas = 2.25 kg.

Total weight of fruits she bought

= 5.75 kg

She gives away fruit = 1.75 kg

Fruit felt with her = 5.75 kg

– 1.75 kg

4.00 kg

Hence 4 kg fruits with her.

3. Total water in the tank = 250 *l*

Water used in a day = 12 *l*

Number of days it will take to empty the tank = 250 *l* ÷ 12 *l*

= 20.83 days

= approx 21 dyas

```
      20.83
  12)250 (
     -24
       100
       -96
         40
        -36
          4
```

Water used in 5 days = 12 *l* × 5

= 60 *l*

Water left in the tank after 5 days

= 250 *l*

– 60 *l*

190 *l*

If 40 *l* of water is added to the tank then water the tank left = 190 *l*

+ 40 *l*

230 *l*

4. A truck carries load = 7.8 tons.

Truck unload the both the stop

= 3.5 tons

2.75 tons

6.25 tons

Material left in the truck

= 7.80 tons

– 6.25 tons

1.55 tons

5. 1 km = 1000 m

3.75 km = 3.75 × 1000 m

= 3750.00 m

You walk metre = 1250 m

You need walk farther = 3750 m

– 1250 m

2500 m

6. 1.5 *l* of juice can be hold by = 1 bottle

1 *l* of juice can hold by = $\frac{1}{1.5}$ bottle

18 *l* of juice can be hold by

= $\frac{1 \times 18 \times 10}{15}$ bottle

= 12 bottle.

1 bottle hold juice = 1.5 *l*

20 bottle hold juice = 1.5 × 20 *l*

= 30.0 *l*

Hence 20 bottle can hold 30 *l* of juice.

7. Weight of 1packet of sugar = 2.5 kg.

Weight of 12 packet = 2.5 × 12 kg
= 30.0 kg

If we use sugar = 8.75 kg.

Sugar left in the packet = 30.0 kg
− 8.75 kg
21.25 kg

8. length of 1 piece = 4.5 m

length of 5 piece = 4.5 × 5 m
= 22.5 m

Yes the tap will be long enough. as
22.5 < 30 m.
So we do not more tape.

Puzzle time [Page No. 121]

1. Sona ran a distance of 5.4 km.
She took break after 3.2 km.
She still have to ran = 5.4 km – 3.2 km
= 2.2 km

2. A baker has flour = 4 kg.
he uses to make bread = 325 g.
= 0.325 kg.
he used to make cake = 1.75 kg.
Total used flour = (0.325 + 1.75)kg
= 2.075 kg.
flour left for baking = (4.000 – 2.075)kg
= 1.925 kg.
= 1.925 × 1000 g
= 1925g.

Real life Connections [Page No. 122]

1. A water bottle hold water
= 1.5 l = 1500 ml
Rahan drink water every hours
⇒ 250 ml
Hours he take to completely empty the bottle ⇒ 1500 ÷ 250
= 6 hrs.
Hence Rohan will take 6 hr to empty the bottle.
Rohan drink water in 1 hour = 250 ml
Rohan drink water in 3 hours = 250 × 3
= 750ml.
Water left after 3 hours = 1500 ml
− 750 ml
750 ml

2. length of fabric = 8.5 m = 850 cm
Piece of each length = 4.5 cm
number of pieces that can be cut from fabric = 850 cm ÷ 4.5 cm

$$= \frac{850 \times 10}{45}$$

$$45 \overline{)8500(} \quad 188$$
$$-45$$
$$400$$
$$-360$$
$$400$$
$$-360$$
$$40$$

Hence 188 pieces be cut from the fabric and 40 am fabric is left.

CHAPTER-12
Money

Rapid Refresh 1 [Page No. 125]

1. (a)

	₹	8	4	5.	7	5	
	₹	4	2	5.	5	0	
+	₹	2	1	0.	2	5	
₹	1	4	8	1.	5	0	

(b)

	₹	3	5	0	0.	5	0	
	₹	5	6	7	5.	7	5	
+	₹	8	2	2	9.	9	0	
₹	1	7	4	0	6.	1	5	

2. (a)

₹	1	2,	4	5	0.	8	0		
	₹	4,	7	5	5.	2	5		
+	₹	3,	1	0	0.	5	0		
₹	2	0,	3	0	6.	5	5		

(b)

	₹	9,	6	5	0.	9	0		
	₹	5,	2	2	5.	4	0		
+	₹	1,	3	5	0.	7	5		
₹	1	6,	2	2	7.	0	5		

3. (a)

	₹	6	8	5.	2	0
–	₹	3	7	5.	4	0
	₹	3	0	9.	8	0

(b)

	₹	4	5	0.	2	5
–	₹	2	7	5.	5	0
	₹	1	7	4.	7	5

4. (a)

	₹	4	3	7	5.	5	0
–	₹	2	1	5	0.	6	0
	₹	2	2	2	4.	9	0

5. (a)

₹	1	8	7	5.	5	0	
					×	3	
	5	6	2	6.	5	0	

(b)

	₹	3	5	0.	4	0	
					×	6	
₹	2	1	0	2.	4	0	

(c)

₹	2	1	5	0	.	7	5
						×	8
₹	1	7	2	0	6	.	0	0

6. (a) ₹ 460.50 ÷ 5

```
   92.10
5)460.50(
 -45
  10
 -10
   05
   -5
    00
    -0
     0
```

Hence ₹ 460.50 ÷ 5 = 92.10

(b) ₹ 3,150.75 ÷ 7

```
   450.107
7)3150.75(
 -28
  35
 -35
   00
   -0
    07
    -7
     050
     -49
       1
```

Hence ₹ 3150.75 ÷ 7
= ₹ 450.107
= ₹ 450.11

(c) ₹ 1257.80 ÷ 4

```
   314.45
4)1257.80(
 -12
  05
  -4
   17
  -16
    18
   -16
     20
     -20
      0
```

Hence ₹ 1257.80 ÷ 4 = ₹ 314.45

Rapid Refresh-2 **[Page No. 126]**

1. A man bought safe set of → ₹ 8,750
A man bought dining table for → ₹ 6,350
A man bought chair for → + ₹ 1,450
Total value of the things → ₹ 16,550

2. The Price of books are → ₹ 48.00
₹ 85.50
₹ 135.75
+ ₹ 72.90
Total price of the books is → ₹ 342.15

3. Rohit's bank balance is ₹ 95.85
His target is ₹ 150.00
The money he need to deposit to reach the target→

₹	1	5	0 .	0	0
	₹	9	5 .	8	5
	₹	5	4 .	1	5

4. ∴ The cost of 5 kg of sweet is → ₹ 800

∴ The cost of 1 kg of sweet is → ₹ 800 ÷ 5

= ₹ 160

$$\begin{array}{r} 160 \\ 5\overline{)800} \\ -5\downarrow \\ \hline 30 \\ -30\downarrow \\ \hline 00 \\ 00 \\ \hline \times \end{array}$$

Thus cost of 1 kg of sweet is = ₹ 160

5. Money deposited in R.D passbook in 1 year = ₹ 48,000

Money deposited one month →

= ₹ 48,000 ÷ 12

= ₹ 4,000

$$\begin{array}{r} 4000 \\ 12\overline{)48000} \\ -48\downarrow \\ \hline 00 \\ -00\downarrow \\ \hline 00 \\ -0\downarrow \\ \hline \times 00 \\ 00 \\ \hline \times \end{array}$$

Hence his monthly contribution is = ₹ 4000

Rapid Refresh-3 **[Page No. 129]**

1. (a) Cost of 2 notebook = ₹ 25.00 × 0

= ₹ 50.00

(b) Cost of 4 pens = ₹ 12.50× 4

= ₹ 50.00

(c) Cost of 1.5 kg of apples = ₹ 80 × 1.5

= ₹ 120.0

		8	0
	×	1.	5
	4	0	0
	8	0	×
1	2	0.	0

2. (a) True (b) True

(c) False (d) True

3. (a) Cost of 3 pens ₹ 12 × 3 = ₹ 36

Cost of 4 notebook ₹ 30 × 4 = ₹ 120

Cost of 2 Erasers ₹ 3 × 2 = + ₹ 6

Total cost = ₹ 162

(b) Cost of 1 kg rice = ₹ 50

Cost of 5 *l* of milk = ₹ 25 × 5

= + ₹ 125

Total cost → ₹ 175

4. Cost of Bread = ₹ 20 × 3 = ₹ 60

Cost of Butter = ₹ 45 × 2 = ₹ 90

Cost of jam = ₹ 70 × 1= + ₹ 70

Total = ₹ 220

5. Biscuit → 2 × ₹ 25 = ₹ 50

Chips → 3 × ₹ 15 = ₹ 45

Juice → 1 × ₹ 60 = + ₹ 60

Total amount to be poid = ₹ 155

Thus total amount to be paid is ₹ 155

Rapid Refresh-4 **[Page No. 132]**

1. (a) ∴ SP > CP

Hence there is a profit

Profit = SP – CP

= ₹ 950.00 – ₹ 825.50

= ₹ 124.50

₹	9	5	0 .	0	0
₹	8	2	5 .	5	0
₹	1	2	4 .	5	0

(b) CP = ₹ 1,250.75 , SP = ₹ 1,150.25

∴ CP > SP

Then there is a loss

Hence Loss = CP – SP

₹ 1250.75 – ₹ 1150.25

= ₹ 100.50

2. (a) CP = ₹ 80 , SP ₹ 100

∴ SP > CP

Hence there is a profit

Profit = SP – CP

₹ 100 – ₹ 80

= ₹ 20

Profit % $= \frac{\text{profit}}{\text{CP}} \times 100$

$= \frac{20}{80} \times 100$

Profit = 25%

(b) CP = ₹ 1,250; SP ₹ 1,175

∴ CP > SP

Hence there is a loss

Loss = CP – SP

₹ 1250 – ₹ 1175

= ₹ 75

$\text{Loss\%} = \frac{\text{Loss}}{\text{CP}} \times 100$

$= \frac{75}{125} \times 100$

Hence Loss% = 6%

3. (a) Vibram bought bicycle = ₹ 2,300

overhead charges = ₹ 150

Hence CP = ₹ 2450

SP of bicycle = ₹ 2800

∴ SP > CP

Hence profit = SP – CP

= ₹ 2800 – ₹2450

= ₹ 350

Hence profit on bicycle is ₹ 350

4. CP of television = ₹ 12,800 + ₹ 500

= ₹ 13,300

SP of television = ₹ 13,400

∴ SP > CP

∴ Profit = SP – CP

= ₹ 13400 – ₹ 13300

= ₹ 100.

Hence profit of television is of ₹ 100.

5. CP of table lamp = ₹ 850

loss in table lamp = ₹ 120

SP of table lamp = ?

Loss = CP – CP

SP = CP – Loss

= ₹ 850 – ₹ 120

= ₹ 730

Hence SP of table lamb is ₹ 730.

6. CP of Notebook = ₹ 25

SP of notebook = ₹ 35

Profit = SP – CP = ₹ 35 – ₹ 25

= ₹ 10

$\text{Profit \%} = \frac{\text{Profit}}{\text{CP}} \times 100$

$= \frac{₹10}{₹25} \times 100$

Profit = ₹ 40%

Hence profit % on notbook is 40%

7. CP of refrigerator = ₹ 6,500 + ₹ 300

= ₹ 6,800

SP of refrigerator = ₹ 7100

∵ SP > CP

Hence Profit = SP – CP

= ₹ 7100 – ₹ 6800

= ₹ 300

$\text{Profit \%} = \frac{\text{Profit}}{\text{CP}} \times 100$

$= \frac{300}{6800} \times 100$

= 4.4%

Hence Profit is 4.4 %

8. CP of mobile phone = ₹ 4000

SP of mobile phone = ₹ 3,600

∴ CP > SP

Hence Loss = CP – SP

= ₹ 4000 – ₹ 3600

= ₹ 400

$\text{Loss\%} = \frac{\text{Loss}}{\text{CP}} \times 100$

$= \frac{400}{4000} \times 100$

= 10%

Hence Loss%on mobile phone = 10%

Reflect your skills

Connect your concepts **[Page No. 132]**

1. Ravi has money → ₹ 1250

He spent on groceries → ₹ 375

On transport → ₹ 240

On stationary → + ₹ 180

Total money spent → ₹ 795

Money left with him = ₹ 1250

– ₹ 795

₹ 455

He want to save money → ₹ 500

So money he needs more = ₹ 500
$$\underline{-\ ₹\ 455}$$
$$₹\ 45$$
Hence he needs ₹ 45 more to save ₹ 500.

2. Rina has money → ₹ 850
She spent on toy → – ₹ 455
Money left with has → ₹ 395
Money She want a save = ₹ 1000
She have to save money = ₹ 1000
$$\underline{-\ ₹\ 395}$$
$$₹\ 605$$
This means she more than ₹ 600 so we answer that she need ₹ 700
She save ₹ 100 in = 1 Week
She save ₹ 1 = $\frac{1}{100}$ week
She save ₹ 700 = $\frac{1}{100} \times 700$ week
= 7 week

3. Cost of Ist 3 item = 3 × ₹ 25 = 975
Cost of IInd 2 items = 2 × 450 = + ₹ 900
Total money he collected = ₹ 1875
his profit in each ₹ 450 item = ₹ 80
his total profit on that item
= (₹ 900 ÷ ₹ 450) × 80
= 2 × ₹ 80 = ₹ 160

$$\begin{array}{r} 2 \\ 450\overline{)900} \\ -\ 900 \\ \hline 0 \end{array}$$

Hence his profit on each ₹ 450 item = ₹ 160

4. Cost of 5 pens = 5 × ₹ 25 = ₹ 125
Cost of 3 Notebooks = 3 × ₹ 55 = + ₹ 165
total amount Raj spent ₹ 290
he paid money = ₹ 500
Money he will get back = ₹ 500 – ₹ 290
= ₹ 210

5. CP = ₹ 375
SP = ₹ 950
Profit = SP – CP
= ₹ 950 – ₹ 375
= ₹ 575

Profit% = $\frac{\text{Profit}}{\text{CP}} \times 100$
$= \frac{575}{375} \times 100$
$= \frac{460}{3} = 153.33\%$

Puzzle times **[Page No. 133]**

1. Shruti had money = ₹ 20974.80
She left money = ₹ 10544.00
She left with money = 10430.80
She divided money in 2 children ₹ 10430.00
Each child get money = ₹ 10430.80 ÷ 2
= ₹ 5215.40

2. CP of table = ₹ 3200
Loss% = 15%
Loss% = $\frac{\text{Loss}}{\text{CP}} \times 100$
$15 = \frac{\text{Loss}}{3200} \times 100$
Loss = 15 × 32 = ₹ 480
SP = CP – loss
= ₹ 3200 – ₹ 480
= 2720
CP of chair = ₹ 1800
P% = 20%
P% = $\frac{\text{P}}{\text{CP}} \times 100$
$20 = \frac{\text{P}}{1800} \times 100$
⇒ P = ₹ 18 × 20 = ₹ 360
SP = CP + P = ₹ 1800 + ₹ 360
= ₹ 2160
Total CP = ₹ 3200 + ₹ 11800
= ₹ 5000
Total SP = ₹ 2720 + ₹ 2160
= 4880
∴ SP < CP
Hence loss = CP – SP
= ₹ 5000 – ₹ 4880
= ₹ 120

$$\text{loss\%} = \frac{\text{Loss}}{\text{CP}} \times 100$$

$$= \frac{120}{5000} \times 100$$

$$= 2.4\%$$

Real life connections [Page No. 133]

1. Riya left had money = ₹ 1500
She bought refrigerator of = ₹ 8760
She bought washing machine of = + ₹ 4150
Total money she spent = ₹ 12910
Money left with her = ₹ 15000 − ₹ 12910
= ₹ 2090
She divided ₹ 2090 between two children.
The money each child get = ₹ 2090 ÷ 2
= ₹ 1045

2. Total CP of bicycle = ₹ 2500 + ₹ 700
= ₹ 3200
CP of bicycle = ₹ 3300
∴ SP > CP
Hence Profit = SP − CP
= ₹ 3300 − ₹ 3200
= ₹ 100
If she sold the bicycle for ₹ 2900
Such that SP = ₹ 2900
then SP < CP
then there will be a loss
Hence loss = CP − SP
= ₹ 3200 − ₹ 2900
= ₹ 300

Hands on Activity : [Page No. 133]
Do It Yourself.

CHAPTER-13
Perimeter and Area

Rapid Refresh–1 [Page No. 137]

1. (a) Perimeter = Sum of all sides
= 6 cm + 5 cm + 2 cm + 8 cm + 1 cm
= 22 cm

(b) Perimeter = Sum of all sides
= 6 cm + 1 cm + 4 cm + 2 cm + 5 cm
= 18 cm

(c) Perimeter = Sum of all sides
= 6 cm + 4 cm + 2 cm + 4 cm + 6 cm + 3 cm
= 25 cm

(d) Perimeter = Sum of all sides
= 13 cm + 2 cm + 2 cm + 11 cm + 12 cm + 12 cm + 2 cm
= 54 cm

2. (a) Perimeter of Pentagon = 7 cm + 5 cm + 6 cm + 4 cm + 8 cm
= 30 cm

(b) Perimeter of rectangle = $2(l + b)$
= 2(10 cm + 5 cm)
= 30 cm

(c) Perimeter of square = 4 × side
= 4 × 9
= 36 cm

3. Sides of isosceles triangle are 6.5 cm, 6.5 cm, 8 cm
Perimeter of triangle = sum of all three sides
= 6.5 cm + 6.5 cm + 8 cm
= 21 cm

4. The perimeter of rectangle = 140 cm
length of rectangle = 50 cm
let breadth of rectangle = x cm
∵ Perimeter of rectangle = $2(l + b)$
140 cm = 2(50 cm + x)

$$\frac{140 \text{ cm}}{2} = 50 \text{ cm} + x$$

$$70 \text{ cm} = 50 \text{ cm} + x$$

$$x = 70 \text{ cm} - 50 \text{ cm}$$

$$= 20 \text{ cm}$$

5. Length of square courtyard = 20 m
Length of wire required for fencing = Perimeter of square
= 4 × side
= 4 × 20 cm
= 80 cm

6. Side of square field = 100 m
Perimeter of squre field = 4 × 100 m
= 400 m
Ravi runs in One round = 400 m

Ravi runs in 4 round = 4 × 400 m
= 1600 m

Rapid Refresh- 2 **[Page No. 142]**

1. (a) l = 8 cm
b = 4 cm
Area of rectangle = l × b
= 8 cm × 4 cm
= 32 cm^2

(b) l = 12.5 m
b = 6.8 m
Area of rectangle = $l \times b$
= 12.5 m × 6.8 m
= 85.00 m^2

2. Sides of square = 20 m
Area of square = side × side
= 20 m × 20 m
= 400 m^2

3. Area of rectangle = 480 sq cm.
breadth of rectangle = 15 cm
let length of rectangle= x

$$\text{Area} = l \times b$$
$$480 \text{ cm}^2 = x \times 15 \text{ cm}$$
$$x = \frac{480 \text{ cm}}{15 \text{ cm}}$$
$$x = 32 \text{ cm}$$

Hence length of rectangle = 32 cm

4. Area of rectangle = 520 cm^2
length of rectangle = 26 cm
let breadth of rectangle = x

$$\text{Area} = l \times b$$
$$520 \text{ cm}^2 = 26 \text{ cm} \times x$$
$$x = \frac{520 \text{ cm}}{26 \text{ cm}}$$
$$x = 20 \text{ cm}$$

5. Height of triangular tile = 18 cm
Its base is = 35 cm

$$\text{Area of the tile} = \frac{1}{2} \times \text{Base} \times \text{height}$$
$$= \frac{1}{2} \times 35 \text{ cm} \times 18 \text{ cm}$$
$$= 315 \text{ cm}^2$$

6. Length of a rectangular field = 80 m
breadth of a rectangular field = 20 m
Area of field = $l \times b$
= 80 m × 20 m
= 1600 m^2
Hence Area to be ploughed = 1600 m2
cost of ploughing 1 m^2 field = ₹ 3.50
Total cost of ploughing = 3.50 × 1600
= ₹ 5600.00
Hence cost of ploughing the field is ₹ 5600

7. Area of playground = 12000 m^2
length of playground = 150 m
let breadth of playground = x
Hence $l \times b$ = Area of rectangular playground
150 m × x = 12000 m^2
x = 12000 m^2 ÷ 150 m
= 80 m
Hence of breadth of the playground is 80 m.
Perimeter of the playground = 2($l \times b$)
= 2(150 m + 80 m)
= 2 × 230 m
= 460 m

Reflect your skills

Connect your concepts: **[Page No. 142]**

1. (a) Length of garden l = 30 m
breadth of garden b = 15 m
Perimeter of garden = 2(l + b)
= 2(30 + 15)m
= 90 m
Area of garden = $l \times b$
= 30 × 15
= 450 m^2

(b) If width is doubled the width
= 2 × 15 m
= 30 m
and length is same : l = 30 m
New perimeter = 2(l + b)
= 2(30 m + 30 m)
= 120 m
Area = $l \times b$
= 30 m × 30 m
= 900 m^2

2. (a) Perimeter of square playground
= 200 m
$4 \times \text{side} = 200 \text{ m}$
$\text{side} = \frac{200 \text{ m}}{4}$
= 50 m
Hence length of one side of the play ground is 50 m.

(b) Wire needed for fencing of 3 rounds
= 3 × Perimeter
= 3 × 4 × side
= 3 × 200
= 600 m

3. (a) Area of reactangular carpet = 150 m^2
length of rectangular carpet = 15 m
let breadth of rectangular carpet = b
$\text{Area} = l \times b$
$150 \text{ m}^2 = 15 \text{ m} \times b$
$b = \frac{150 \text{ m}}{15 \text{ m}}$
$b = 10 \text{ m}$
Hence width of the carpet = 10 m

(b) The new length of the carpet = 15 m + 5 m
= 20 m
Width of the carpet = 10 m
New Area of the carpet = $l \times b$
= 20 m × 10 m
= 200 m^2

4. (a) Base of triangular Park = 20 m
Height of triangular Park = 12 m
Area of triangular park = $\frac{1}{2}$ × base × height
$= \frac{1}{2} \times 20 \text{ m} \times 12 \text{ m}$
= 120 m^2

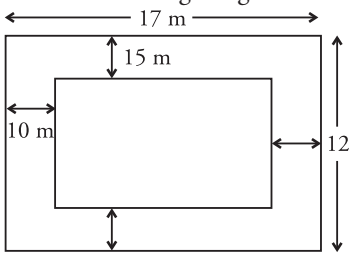
(b) Area of another triangular park
= 120 m^2
Base of park = 16 m
height of park = h m
Area = $\frac{1}{2}$ × base × height of triangular park
$120 \text{ m}^2 = \frac{1}{2} \times 16 \text{ m} \times h$
$h = \frac{2 \times 120 \text{ m}^2}{16 \text{ m}} = 40 \text{ m}$

5. (a) Area of square room = 81 m^2
length of one side of the rooms = s
side × side = 81 m^2
side × side = 9 × 9 m^2
side = 9 m
Hence the length of one side of the park is 9 m.

(b) Side of square tile = 3 m
Area of tile = 9 m^2
number of tile required
$= \frac{\text{Area of square room}}{\text{Area of square tile}}$
$= \frac{81 \text{ m}^2}{9 \text{ m}^2}$
= 9 tiles

Puzzle time: **[Page No. 143]**

1. length of rectangular garden = 15 m
breadth of rectangular garden = 10 m



If 1 m walking path is added to the garden.
Then new length = 17 m
new breadth = 12 m
New perimeter of the garden = $2(l + b)$
= 2(17 m + 12 m)
= 58 m
New Area of the garden = $l \times b$
= 17 m × 12 m
= 204 m^2

2. Area of square playground = 1600 m^2

side × side = 1600 m^2

= 40 m × 40 m

∵ side = 40 m

length of fencing wire needed to fence around the playground = 4 × side

= 4 × 40 m

= 160 m

Real life connections: **[Page No. 143]**

length of rectangular garden = 15 m

breadth of rectangular garden= 10 m

fencing wire required for the garden

= 2(15 + 10)

= 50 m

Cost of 1 m fencing = ₹ 120

Cost of 150 m fencing = 50 m × ₹ 120

= 6000 m

Hence total cost of fencing is 6000 m.

If the length and breadth of the garden is increased by 5 m,

then new length = 20 m

new breadth = 15 m

Hence total required fencing wire

= 2(l + b)

= 2(20 + 15)m

= 70 m

Total cost of fencing = 70 m × ₹ 120

= ₹ 8400

Hands on Activity: **[Page No. 143]**

Do it yourself

CHAPTER-14
Data handling

Rapid Refresh–1 **[Page No. 146]**

1. Zoo → 7

Museum → 16

Garden → 9

Beach → 13

Planetrium → 8

(a) 53

(b) Museum

(c) 13 – 8 = 5 students

2. Monday → 12

Tuesday → 18

Wednesday → 21

Thursday → 9

Friday → 18

(a) 21

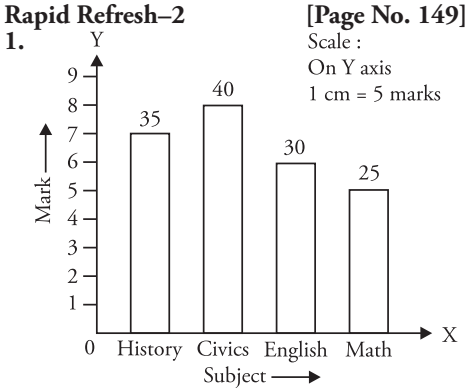
(b) Tuesday and Friday

(c) Wednesday

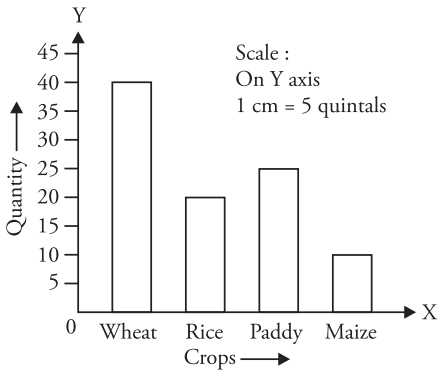
(d) 78

Rapid Refresh–2 **[Page No. 149]**

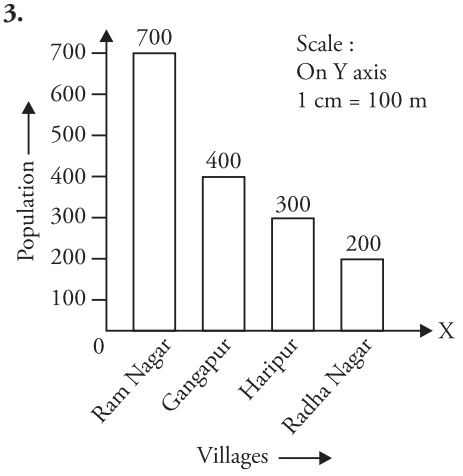
1.



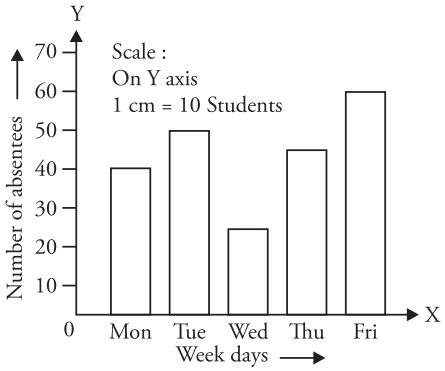
2.



3.



4.



5. (a) The bar group tell us about the pupulations of different cities.
(b) Bharatpur and Udaipur
(c) 4 cities (Jaipur, Bharatpur, Ajmer, Udaipur)

6. (a) In February
(b) 12 cm
(c) In May

Rapid Refresh–3 **[Page No. 152]**

1. (a) Adventure movies
(b) Mystery
(c) Adventure

2. (a) (i) $\frac{1}{4}$ of 40 $= \frac{1}{4} \times 40 = 10$

(ii) $\frac{1}{4}$ of 40 $= \frac{1}{4} \times 40 = 10$

(iii) $\frac{1}{8}$ of 40 $= \frac{1}{8} \times 40 = 5$

(iv) $40 - (10 + 10 + 5) = 40 - 25 = 15$

(b) Dolly
(c) Pihu and Rohan
(d) $10 - 5 = 5$
Hence Pihu get 5 more votes than Ravi.

3. (a) March and April
(b) January
(c) 550 Jeans
(d) 900 – 710 = 190 Jeans

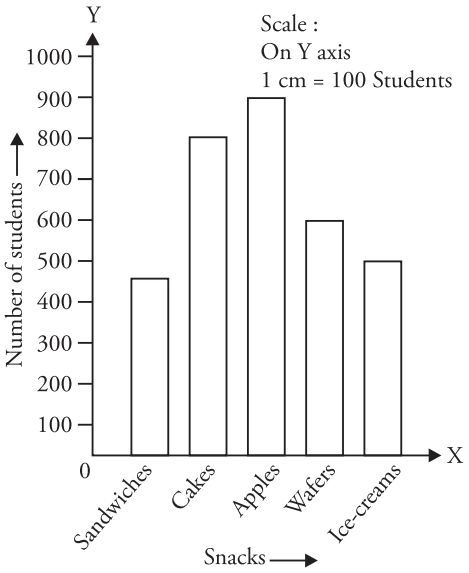
Reflect your skills

Connect your concepts: **[Page No. 153]**

1. (a) On Sunday the poppadam produced maximum.
(a) the count of poppadam is 83
(b) Friday has more poppadam than Monday by 1.

2. Do it yourself

3.

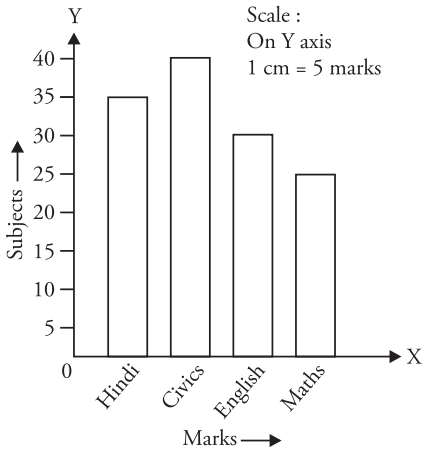


4.

Days	**No. of Absentees** ☺ **= 5 Student**
Monday	☺☺☺☺☺ ☺☺☺☺
Tuesday	☺☺
Wednesday	☺☺☺☺
Thursday	☺☺☺☺ ☺☺
Friday	☺☺☺☺ ☺☺

5. (a) 40 marks
(b) 70
(c) Maths
(d) Hindi

6.



Subject	Marks
History	
Civics	
English	
Maths	

Puzzle Time: **[Page No. 155]**

1. $\frac{1}{4}$ of a circle = 40 students

$\frac{1}{4}$ × circle = 40 students

Circle = 40 × 4 students

= 160 students

Hence there are 160 students in the class.

no. of students in section B, C and D

= 160 – 40 = 120 students

If section are divided equally, then no. of students in each section = $\frac{120}{3}$ students

= 40 students

2. Books sold in a week = 1 5
2 3
1 8
1 2
+ 2 0
8 8 students

the shopkeeper sold book on saturday

= 2 × books sold on Wednesday

= 2 × 18 books

= 36 books

3. Average of his marks

$= \frac{45+90+85+75+35}{5}$

$= \frac{330}{5} = 66$

To raise the average to 70, he needs to score = 5 × 70 – 330

= 350 – 330

= 20 marks

4. Total books sold during the week

= 1 5
2 3
1 8
1 2
+ 2 0
8 8 books

Books he wants to restock = 88 + $\frac{25}{100}$ of 88

= 88 + 22

= 110 books

2. Fraction of students who prefer cabes

$= \frac{900}{5000} = \frac{9}{50}$

Fraction of student who prefer sandwiches

$= \frac{800}{5000} = \frac{4}{25}$

❑❑