Rethink Mathematics-5

Chapter-1 Large Numbers

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Reading of 7 digit, 8 digit and 9 digits numbers	Learners will be able to read and write 7, 8 and 9 digit numbers	Make flash cards of 7, 8 and 9 digit numbers. Show it to the children and ask them to read the numbers in words.	Place commas and write the numbers in Indian and international system i) 2468792 ii) 64872
Indian and International system	Reading and writing numbers in Indian and international system		
Place value, face value, standard and expanded form, successor and predecessor	Learners will be able to find out the place value and face value of a digit is a given number. They will be able to express in expanded form and standard and find out the successors	Activity worksheets based on place value, pace value successors and predecessors to be one	Find the successors of a number whose predecessor is248379
Comparison ordering and formation of numbers	Learners will be able to identify the smaller/ greater number and form numbers using the given digits.	Activities based on formation of numbers to be done	Arrange the following ascending order. 246359, 264539, 26453, 246539
Roman numerals	Learners will be able to write numbers in Roman numerals	using matchsticks ask students to write Roman numbers 	Write the Roman numerals for i) 35 ii) 42 iii) 189

Exercise 1.1

1. Place commas according to the Indian Number System and write the numbers in words.

(a) 26,45,904 – Twenty six lakh forty five thousand nine hundred and four.

(b) 4,96,842 – Four lakh ninety six thousand eight hundred and forty two.

(c) 1,13,45,620 – One crore thirteen lakh forty five thousand six hundred and twenty.

(d) 24,30,00,700 – Twenty four crore thirty lakh and seven hundred.

(e) 24,06,00,815 – Twenty four crore six lakh eight hundred and fifteen.

(f) 2,34,567 – Two lakhs thirty four thousand five hundred and sixty seven.

2. Place commas according to the International Number System and write the number in words.

(a) 463,279 – Four hundred and sixty three thousand two hundred and seventy nine.

(b) 1,274,593 – One million two hundred and seventy four thousand five hundred and ninety three.

(c) 2,004,001 – Two million four thousand and one.

(d) 56,497,122 – Fifty six million four hundred ninety seven thousand one hundred and twenty two.

(e) 5,600,000 – Five million and six hundred thousand.

(f) 5,100,085 – Five million one hundred thousand and eighty five.

3. Write the following in figures.

(a) Fifteen crores sixty five lakh two hundred and twenty. **15,65,00,220**

(b) Sixty million. **60,000,000**

(c) Fifty five million two hundred and forty six thousand. **55,246,000**

(d) Six lakh eighty six thousand and seven. **6,86,007**

(e) Thirty three crores twenty thousand eight hundred and sixty five. **33,00,20,865**

4. Express each of the following numbers in the other number system.

	Indian System (in words)	International System (in figures)
a.	Four crore sixty eight lakh five thousand two hundred and fifteen	46,805,215
b.	Twenty two crore eighty six lakh twenty thousand and eight hundred	228,622,800
c.	Twenty four crore eight lakh five thousand two hundred and forty.	240,805,240
d.	Six crore forty six lakhs twenty five thousand nine hundred and eighteen.	64,625,918
e.	Ninety lakhs	9 million

Exercise 1.2

1. Write the face value and place value of the underlined digits.

(a) FV = 2, PV = 200 (b) FV = 4, PV = 400000000 (c) FV = 9, PV = 9000 (d) FV = 8, PV = 8000000

2. Write the numbers in expanded form.

(a) **468705206** – 400000000 + 60000000 + 8000000 + 5000 + 200 + 6

(b) **332453340** – 300000000 + 30000000 + 2000000 + 400000 + 50000 + 3000 + 300 + 40 + 0

(c) **2574108** – 2000000 + 500000 + 70000 + 4000 + 100 + 0 + 8

(d) **955163249** – 900000000 + 50000000 + 5000000 + 100000 + 60000 + 3000 + 200 + 40 + 9

3. State the successor and predecessor of the following numbers.

(a) **78943562** Successor- 78943563
Predecessor - 78943561

(b) **324567980** Successor- 324567981
Predecessor - 324567979

(c) **2574108** Successor - 2574109
Predecessor - 2574107

(d) **159065** Successor - 159066
Predecessor - 159064

4. Find the difference between the place value of two 8s in the number 285986499.

Place value of first 8 = 80000000
Place value of second 8 = 80000
Difference = 800000000 – 80000
= 7,99,20,000

5. Find the difference between the place value and face value of the digit 2 in the number 112956119.

Place value of 2 = 2000000
Face value of 2 = 2
Difference = 2000000 – 2
= 19,99,998

6. State the number just after 1458999.

The number just after 1458999 is 1458999 + 1
= 1459000

Exercise 1.3

1. Use the symbols >, < and = to compare the numbers.

(a) 2718183 [>] 1453455
(b) 24515688 [>] 245654
(c) 3728173 [>] 2983177
(d) 6251517 [<] 6700281
(e) 6918373 [>] 718379

2. Arrange the following numbers in ascending order.

(a) 9382871; 635217; 1037274; 637274; 1747382
Ascending = 6,35,217 < 6,37,274 < 10,37,274 < 17,47,382 < 93,82,871

(b) 24648133; 91843544; 14238317; 34329218; 10245
Ascending = 10,245 < 1,42,38,317 < 2,46,48,133 < 3,43,29,318 < 9,18,43,544

3. Arrange the following numbers in descending order.

(a) 4354345; 5285900; 5296300; 4364143
Descending = 52,96,300 > 52,85,900 > 43,64,143 > 43,54,345

(b) 111245000; 23525145; 1345235; 1345140
Descending = 11,12,45,000 > 2,35,25,145 > 13,45,235 > 13,45,140

4. Write the greatest 6 digit number using the digit 2, 5, 0, 9, 3, 8.

2, 5, 0, 9, 3, 8 = 9,85,320

5. Write the smallest 8 digit number using the digits 1, 3, 4, 7, 8, 5, 2, 6.

1, 3, 4, 7, 8, 5, 2, 6 = 1,23,45,678

6. Form the smallest 7 digit number using the digit 1, 0, 3, 2, 5, 9, 4.

1, 0, 3, 2, 5, 9, 4 = 10,23,459

7. Form the greatest 6 digit number using the digits 3, 5, 8, 2, 6 (repeating 6 two times).

3, 5, 8, 2, 6 = 8,66,532

Exercise 1.4

1. Compare the given roman numerals using >, < or =.

(a) III VI

= **3** < **6**

∴ III VI

(b) VIII X

= **8** < **10**

(b) ∴ VIII X

(c) XXVIII XXXVII

= **28** < **37**

∴ XXVIII XXXVII

(d) XXV XV

= **25** < **15**

(d) ∴ XXV XV

2. Write the numbers for the following Roman numeral.

(a) LXVI = 66 (b) LXXVII = 77

(c) XIV = 14 (d) CCCVIII = 308

(e) XLIV = 44 (f) XXX = 30

3. Match the Roman numerals with the numbers.

(a) II = 2

(b) CXII = 112

(c) CLIX = 159

(d) XXVI = 26

(e) DCVI = 606

SELF ASSESSMENT-1

Choose the correct answer from the given options. (Questions 1 to 5)

1. The face value of the digit 4 in 24657 is:

Face value of a number is the number itself.

∴ face value of 4 in 24,657 is 4

Ans. option (a) 4

2. The largest 4-digit number is:

∴ 9999 is the largest 4-digit number

Ans. Option (b) 9999

3. **The number 6432 when rounded off to nearest hundred will be _____.**
   6432 when rounded off to nearest hundred is
   Ans. option (c) 6400
4. **The least 4-digit number formed by 2,4,3,0 is:**
   The least 4-digit number formed by 2, 4, 3, 0 is
   Ans. option (b) 2034
5. **The sum of the place values of all the digits of 1234 is _____.**
   1000 + 200 + 30 + 4 = 1234
   Ans. option (b) 1234
6. **Insert commas and write 246659 in Indian and International system.**
   Indian system = 2,46
7. **Arrange the following number in ascending order.**
   3406; 28140; 3706; 6980; 24577
   Ascending = 3,406 < 3,706 < 6,980 < 24,577 < 28,140
8. **The roman numeral for 777 is _____.**
   777 = DCCLXXVII
9. **Find the number whose successor is 213459.**
   Since = 213458 + 1 = 213459
   Ans. 213458
10. **Write the expanded form of 3179284.**
    31,79,284 = 30,00,000 + 1,00,000 + 70,000 + 9,000 + 200 + 80 + 4

Chapter-2 Addition and Subtraction

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Addition and Subtraction of 7 digit, 8 digit and 9 digit numbers	Learners will be able to add 2 to 3 numbers of 7 digit, 8 digit and 9 digit numbers.	The teachers can do worksheets based on addition and subtraction	Fill in the boxes 2 4 6 8 2 9 + 3 2 1 □ 5 □ 5 □ □ 3 8 1
Word problems and problem related to real life situation	Learners will also be able to solve real life problems involving addition and subtraction	Real life situations can be given to the students and they can be asked to calculate and tell the result.	A truck carries 465247 will of goods on Monday and 326787 units and Tuesday Find the total number of units carried in 2 days.

Exercise 2.1

1. Add the following.

(a)

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

(b)

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

(c)

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

(d)

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

(e)

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

(f)

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

2. Arrange in columns and add.

(a) 1242364; 3615425; 346565

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

(b) 364236493; 63215793; 348215925

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

(c) 1325185; 1475153; 21540365; 10253592

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

(d) 4287835; 347492; 26987

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

(e) 253645000; 18235622; 397243033

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

3. In the year 2012, 2,45,63,402 birds migrated and in the next year 23,45,105 birds migrated. How many birds migrated in all?

Birds migrated in 2012 = 2 4 5 6 3 4 0 2
Birds migrated is 2013 = + 2 3 4 5 1 0 5
Total birds migrated = 2 6 9 0 8 5 0 7

∴ Total 2,69,08,507

4. For a national examination 35,42,135 students registered from north region and 1,22,43,174 students registered from east region. How many total students are registered from north and east region?

Students registered from north region = 3 5 4 2 1 3 5
Students registered from east region = + 1 2 2 4 3 1 7 4
Total students registered = 1 5 7 8 5 3 0 9

∴ Total 15785309 students registered.

5. An ice-cream factory produced 3,85,184 units in the month of April, 12,83,204 units in the month of May and 3,24,15,305 units in the month of June. Find the total units produced in the April-June quarter?

Production is the month of April = 3 8 5 1 8 4
Production is the month of May = 1 2 8 3 2 0 4
Production is the month of June = + 3 2 4 1 5 3 0 5
3 4 0 8 3 6 9 3

∴ Total production was 3,40,83,693

Exercise 2.2

1. Subtract the following.

(a)
2 4 5 9 2 6 4
– 1 3 3 2 5 6
2 3 2 6 0 0 8

(b)
3 0 4 0 3 5 9 2
– 1 1 3 2 1 0 2 2
1 9 0 8 2 5 7 0

(c)
1 3 4 5 3 6 1 4 2
– 2 4 2 9 1 0 0
1 3 2 1 0 7 0 4 2

(d)
4 3 7 6 4 1 5
– 1 3 0 4 0 0 0
3 0 7 2 4 1 5

(e)

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

(f)

	3	6	4	5	6	2	5	3
–		1	0	2	4	6	6	4
	3	5	4	3	1	5	8	9

2. Arrange in columns and subtract.

(a) 345672 from 11920715

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

(b) 193246000 from 245632111

	2	4	5	6	3	2	1	1	1
–	1	9	3	2	4	6	0	0	0
		5	2	3	8	6	1	1	1

(c) 26500 from 158219505

	1	5	8	2	1	9	5	0	5
–					2	6	5	0	0
	1	5	8	1	9	3	0	0	5

(d) 143222 from 2800000

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

(e) 1432546 – 2465

	1	4	3	2	5	4	6
–				2	4	6	5
	1	4	3	0	0	8	1

3. How much is 32,18,45,109 greater than 18,18,36,108?

	3	2	1	8	4	5	1	0	9
–	1	8	1	8	3	6	1	0	8
	1	4	0	0	0	9	0	0	1

4. A company deposited ₹41,35,643 on Monday and withdraw 13,45,222 on Wednesday. What is the account balance on Thursday?

Money deposited =
Money withdraw =
Balance

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

5. A factory produced ₹1,35,235 units in a week and 3,15,135 in the next week. By how much was the production more in the second week?

Production is 1st week =
Production is 2nd week =

	1	3	5	2	3	5
–	3	1	5	1	3	5
	1	7	9	9	0	0

Second week production is more by 1,79,900.

6. In a field 2, 66, 437 seeds were sown. Out of these only 42,300 seeds grew. How many seeds did not grow?

Seed sown	=	2 6 6 4 3 7
Seeds grew	=	– 4 2 3 0 0
Seeds did not grow	=	2 2 4 1 3 7

∴ 2,24,137 seeds did not grow.

Exercise 2.3

1. Solve the following.

(a) 245645 + 134264 – 156624

2 4 5 6 4 5	→	3 7 9 9 0 9
– 1 3 4 2 6 4		– 1 5 6 6 2 4
3 7 9 9 0 9		2 2 3 2 8 5

Answer : 223285

(b) 135642 + 111000 – 245678

1 3 5 6 4 2	→	2 4 6 6 4 2
– 1 1 1 0 0 0		– 2 4 5 6 7 8
2 4 6 6 4 2		9 6 4

Answer : 964

(c) 20005 + 43135 – 13345

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

Answer : 49795

2. Three candidates contested in an election. The total number of votes polled was 82,749. One candidate got 42,100 votes and second candidate got 2,300 votes. How many votes did the third candidate get?

Voter of 1 candidate	=	6 3 1 4 0
Voter of 2 candidate	=	– 4 3 3 4 5
Total of both candidate	=	4 9 7 9 5

Total votes	=	8 2 7 4 9
Total of both candidate	=	– 4 4 4 0 0
Vote of 3rd candidate	=	3 8 3 4 9

∴ The Third candidate got 38349 votes

3. From a ribbon of length 2500 cm, two pieces of 120 cm and 1395 cm are cut off. Find the length of the remaining ribbon.

Length of 1 piece = 120

Length of 2 piece = 1395

Total of both pieces = 1515

Length of ribbon = 2500

Length of ribbon = 1515

Remaining ribbon = 985

∴ 985 cm of ribbon is left.

4. An oil station had 56450 L of petrol. It gave 13,400 L at one station and 24,355 L at another station. What quantity of petrol is left at the oil station?.

Oil given at 1st station = 13400 L

Oil given at 2st station = 24355 L

Total of both station = 37755 L

Total oil = 56450 L

Total of both station = 37755 L

Oil left = 18695 L

∴ 18695 L of oil is left.

SELF ASSESSMENT-2

Choose the correct options (Questions 1 to 5)

1. The sum of 5436289 and 2575657 is:

5436289 − 2575657 = 8011946 **Ans: (a)**

2. One lakh fifty thousand added to five crore nine thousand is:

150000 − 50009000 = 50159000 **Ans: (c)**

3. The difference of 2736879 and 2605689.

2736879 − 2605689 = 131190 **Ans: (d)**

4. 52000 + **<u>510000</u>** = 562000

562000 − 52000 = 510000 **Ans: (c)**

5. Subtract the greatest 7 digit number with smallest 6 digit number.

Greatest 7 digit number	=	9 9 9 9 9 9 9
Smallest 6 digit	=	– 1 0 0 0 0 0
Difference		9 8 9 9 9 9 9

Ans : option (a)

6. There are 9873225 voters in a district. Out of them 8563214 voters voted. How many people did not vote?

Total voters	=	9 8 7 3 2 2 5
People voted	=	– 8 5 6 3 2 1 4
No of people did not vote	=	1 3 1 0 0 1 1

∴ 1310011 people did not vote.

7. Solve : 245342 – 142678 + 2052.

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

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

Ans: 104716

8. Add: 224682 + 259600 + 362142.

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

Chapter-3 Multiplication and Division

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Multiplication fact, properties multiplication by 10,100,100 multiplication 5 digit 1 digit, 2 digit and 3 digit number.	Learners will be able to perform multiplication by 1 digit, 2 digit and 3 digit number.	Prepare flash cards containing multiplication. Ask the children to multiply and answer. 174 × 3 242 × 13	Multiply: 24683 × 25
Division facts, properties division by 10,100 and 1000 Division of 5 and 6 digit number by 1 and 2 digit number.	Learners will be able to perform division of 5 and 6 digit number by 1 and 2 digit number.	Worksheets in working division to be done in class	Divide : 387452 ÷ 13
Word problems based on real life situation involving multiplication and division	Learners will be able to solve real life situation	Story activity involving multiplication and division	A box of peas contains 24 costs ₹360. Also find the cost of 82 pens.

Exercise 1.4

1. Find the products:

(a) $24650 \times 100 = 2465000$

(b) $15932 \times 1000 = 15932000$

(c) $59153 \times 10 = 591530$

(d) $11326 \times 400 = 4530400$

(e) $92315 \times 20 = 1846300$

(f) $3152 \times 5000 = 15760000$

2. Multiply:

(a) 13125×3

	1	3	1	2	5
				×	3
3	9	3	7	5	

(b) 54325×25

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

(c) 25645×236

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

(d) 31245×95

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

Ans: 2968275

(e) 61525×139

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

Ans: 85,51,975

(f) 1522×242

	1	5	2	2	
	×	2	4	2	
	3	0	4	4	
6	0	8	8	0	
3	0	4	4	0	0
3	6	8	3	2	4

Ans: 3,68,324

3. Fill in the blanks by using suitable property of multiplication.

(a) $12645 \times 37 = 37 \times$ **12645 (Commutative Property)**

(b) $24656 \times 55 \times 2 = 55 \times$ **24656** $\times 2$ **(Associative Property)**

(c) $2435 \times (20 + 35) = (2435 \times 20) + (2435 \times$ **35) (Distributive property)**

4. Find the product using suitable properties of multiplication.

(a) $32459 \times 20 \times 5$

$= 324759 \times 100$

$= 32,45,900$

Ans. 32,45,900

(b) $200 \times 18345 \times 5$

$= 18345 \times 1000$

$= 1,83,45,000$

Ans. 1,83,45,000

5. An NGO collected donations to help the flood victims. On an average `525 was donated by 15,235 people each. What was the total collection?

Total no. of people = 15,235
Amount donated by each person = ₹525
∴ Total collection = 1525 × 525
= 7998375

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

Ans: ₹79,98,375 is the total collection

6. Sohini wants to make necklaces for the children of an orphange. 98 beads are required to make one necklace. How many beads will be required to make 2350 necklaces?

Total no. of necklaces = 2350
No. of beads for each necklace = 98
∴ Total no. of beads required = 2350 × 98
= 230300

	2	3	5	0	
		×	9	8	
1	8	8	0	0	
2	1	1	5	0	0
2	3	0	3	0	0

Ans: 2,30,300 beads required

7. Anabelle sells theatre tickets for ₹255 each. How much money does she collect if she sells 145 tickets?

Total no. of tickets sold = 145
Cost of each ticket = 255
Total amount of money collected = 255 × 145
= 36975

		2	5	5	
	×	1	4	5	
	1	2	7	5	
1	0	2	0	0	
2	5	5	0	0	
3	6	9	7	5	

Ans: ₹36,975 was collected

Exercise 3.2

1. Fill in the blanks.

(a) 5926145 ÷ 1 = **5926145**
(b) 0 ÷ 3645243 = **0**
(c) **137435** ÷ 1 = 137435
(d) 52645 ÷ **52645** = 1
(e) 2059 ÷ 2059 = **1**

2. Divide the following using short division method.

(a)
$$5\overline{)12830}\quad 2566$$
Quotient= 2566
Remainder = 0

(b)
$$7\overline{)924}\quad 132$$
Quotient= 132
Remainder = 0

(c)
$$6\overline{)12240}\quad 2040$$
Quotient= 2040
Remainder = 0

(d)
$$5\overline{)12830}\quad 2566$$
Quotient= 2566
Remainder = 0

(e)
$$7\overline{)925}\quad 132-1$$
Quotient= 132
Remainder = 1

(f)
$$6\overline{)12245}\quad 2040-5$$
Quotient= 2040
Remainder = 5

2. Divide the following using short division method.

(a) $342675 \div 5$

$$\begin{array}{r} 68535 \\ 5\overline{)342675} \\ -30\downarrow \\ \hline 042 \\ -40\downarrow \\ \hline 26 \\ -25\downarrow \\ \hline 17 \\ -15\downarrow \\ \hline 025 \\ -25 \\ \hline \times \end{array}$$

Q = 68535
R = 0

verification :
$68535 \times 5 = 342675$

(b) $13642 \div 7$

$$\begin{array}{r} 1948 \\ 7\overline{)13642} \\ -7\downarrow \\ \hline 66 \\ -63\downarrow \\ \hline 034 \\ -28\downarrow \\ \hline 62 \\ -56 \\ \hline 06 \end{array}$$

Q = 1948
R = 6

verification :
$1948 \times 7 = 13636 + 6 = 13642$

(c) $134655 \div 4$

$$\begin{array}{r} 33663 \\ 4\overline{)134655} \\ -12\downarrow \\ \hline 14 \\ -12\downarrow \\ \hline 26 \\ -24\downarrow \\ \hline 25 \\ -24\downarrow \\ \hline 15 \\ -12 \\ \hline 03 \end{array}$$

Q = 33663
R = 3

verification :
$33663 \times 4 = 134652 + 3$
$= 134655$

(d) $14611 \div 6$

$$\begin{array}{r} 2435 \\ 6\overline{)14611} \\ -12\downarrow \\ \hline 26 \\ -24\downarrow \\ \hline 21 \\ -18\downarrow \\ \hline 31 \\ -30 \\ \hline 01 \end{array}$$

Q = 2435
R = 1

verification :
$2435 \times 6 = 14610 + 1 = 14611$

(e) $2046 \div 3$

$$
\begin{array}{r}
682 \\
3\overline{)2046} \\
-18\downarrow \\
\hline
24 \\
-24\downarrow \\
\hline
06 \\
-6\downarrow \\
\hline
0 \\
\hline
\end{array}
$$

Q = 682
R = 0

verification :
$682 \times 3 = 2046$

(f) $1400 \div 2$

$$
\begin{array}{r}
700 \\
2\overline{)1400} \\
-14\downarrow \\
\hline
00 \\
-0\downarrow \\
\hline
00 \\
-0 \\
\hline
0 \\
\hline
\end{array}
$$

Q = 700
R = 0

verification :
$700 \times 2 = 1400$

Exercise 3.3

1. Divide and verify.

(a) $320265 \div 165$

$$
\begin{array}{r}
1941 \\
165\overline{)320265} \\
-165\downarrow \\
\hline
1552 \\
-1485\downarrow \\
\hline
676 \\
-660\downarrow \\
\hline
165 \\
-165 \\
\hline
\times \\
\hline
\end{array}
$$

Q = 1941
R = 0

verification :
$1941 \times 165 = 320265$

(b) $7654321 \div 246$

$$
\begin{array}{r}
31115 \\
246\overline{)7654321} \\
-738\downarrow \\
\hline
274 \\
-246\downarrow \\
\hline
283 \\
-246\downarrow \\
\hline
372 \\
-246 \\
\hline
1261 \\
-1230 \\
\hline
\times \\
\hline
\end{array}
$$

Q = 3115
R = 31

verification :
$246 \times 31115 = 7654321$

(c) $30958 \div 23$

$$
\begin{array}{r}
1346 \\
23\overline{)30958} \\
-23\downarrow \\
\hline
79 \\
-69\downarrow \\
\hline
105 \\
-92\downarrow \\
\hline
138 \\
-138 \\
\hline
\times \\
\hline
\end{array}
$$

Q = 1346
R = 0

verification :
$1345 \times 23 = 30958$

2. Divide the following numbers and find the quotient and remainder.

(a) $6423792 \div 42$

$$
\begin{array}{r}
152947 \\
42\overline{)6423792} \\
-42\downarrow \\
\hline
222 \\
-210\downarrow \\
\hline
123 \\
-84\downarrow \\
\hline
397 \\
-378\downarrow \\
\hline
199 \\
-168\downarrow \\
\hline
312 \\
-294 \\
\hline
18
\end{array}
$$

Q = 152947
R = 18

(b) $1862059 \div 23$

$$
\begin{array}{r}
80959 \\
23\overline{)1862059} \\
-184\downarrow\downarrow \\
\hline
220 \\
-207\downarrow \\
\hline
135 \\
-115\downarrow \\
\hline
209 \\
-207 \\
\hline
2
\end{array}
$$

Q = 80959
R = 2

(c) $3490156 \div 123$

$$
\begin{array}{r}
28375 \\
123\overline{)3490156} \\
-246\downarrow \\
\hline
1030 \\
-984\downarrow \\
\hline
461 \\
-369\downarrow \\
\hline
925 \\
-861\downarrow \\
\hline
646 \\
-615 \\
\hline
31
\end{array}
$$

Q = 28375
R = 31

(d) $783456 \div 816$

$$
\begin{array}{r}
960 \\
816\overline{)783456} \\
-7344\downarrow \\
\hline
04905 \\
-4896\downarrow \\
\hline
00096 \\
00 \\
\hline
96
\end{array}
$$

Q = 960
R = 96

3. The cost of 239 washing machines is ₹90,41,848. Find the cost of one washing machine.

Cost of 239 washing machines = ₹ 9041848

Cost of 1 washing machines = 9041848 – 239

$$
\begin{array}{r}
37832 \\
239\overline{)9041848} \\
-717\downarrow \\
\hline
1871 \\
-1673\downarrow \\
\hline
1988 \\
-1912\downarrow \\
\hline
764 \\
-717\downarrow \\
\hline
478 \\
-478 \\
\hline
\times
\end{array}
$$

∴ **Cost of 1 washing machine is ₹37,832**

4. A company had distributed gift vouchers to its employee worth ₹8546130 in total. If there are 1345 employee each employee got gift vouchers of how much?

No of employers = 1345

Worth of gift vouchers each employee gets = ₹8546130 ÷ 1345

= ₹6354

$$\begin{array}{r} 6354 \\ 1345\overline{)\,8546130} \\ -8070\downarrow \\ \hline 4761 \\ -4035\downarrow \\ \hline 7263 \\ -6725\downarrow \\ \hline 5380 \\ 5380 \\ \hline \times \end{array}$$

∴ **Each employee got a gift voucher worth ₹6354.**

5. If the divisor is 43, Quotient is 2652 and remainder is 2, find the dividend.

Dividend = Divisor × Quotient + Remainder

= (43 × 2652) + 2

= 114036 + 2

= 114038

Exercise 3.4

1. Simplify the following:

(a) 2 of 18 – 3

= 36 – 3

= 33

Ans : 33

(b) 18 – 2(5 + 1)

= 18 × 2 × 6

= 18 – 12

= 6

Ans : 6

(c) 18 – 7 × 5 ÷ 5

= 18 – 7 × 1

= 18 × 7

= 11

Ans : 11

(d) (12 – 7) + (18 ÷ 3)

= 5 + 6

= 11

Ans : 11

2. Solve the following:

(a) (6 + 20) + 2 + (15 – 15)

= 26 + 2 + (15 – 15)

= 26 + 2 + 0

= 28

Ans : 28

(b) 5 + {28 – (19 – 7)}

= 5 + {28 × 12}

= 5 + 16

= 21

Ans : 21

(c) $4-3+4\times3+18\div6$

$= 4-3+4\times3+3$

$= 19-3$

$= 16$

Ans : 16

(d) $12 \text{ of } 5+(18-3)$

$= 12\times5+(18-3)$

$= 12\times5+15$

$= 60+15$

$= 75$

Ans : 75

(e) $45-[38-60\div3-(6-9\div3)\div3]$

$= 45-[38-60\div3-(6-3)\div3]$

$= 45-[38-60\div3-3\div3]$

$= 45-[38-20-1]$

$= 45-17$

$= 28$

Ans : 28

SELF ASSESSMENT-3

Choose the correct options. (Question 1 to 5)

1. The product of 153×22:

	1	5	3
	×	2	2
	3	0	6
3	0	6	×
3	3	6	6

∴ **The answer is – (d) 3366**

2. Fill in the box

$3842\times\ \ = 2875\times3842$

∴ **The answer is – (b) 2875**

This is because of the commutative property. a × b will be equal to b × a.

3. 5,000 × 25,000

			2	5	0	0	0		
			×	5	0	0	0		
			0	0	0	0	0		
		0	0	0	0	0	×		
	0	0	0	0	0	×	×		
1	2	5	0	0	0	×	×	×	
1	2	5	0	0	0	0	0	0	

∴ **The answer is – (b) 12,50,00000**

4. Salley has a ribbon 4 metre long. She cut the ribbon into 7 equal parts. Which expression shows the length of each ribbon.

Length of ribbon = 4m

No. of equal parts = 7

∴ The expression = $4m\div7$

∴ **The answer is – (b) $4\div7$**

5. The remainder when 36875 is divided by 134.

$$\begin{array}{r} \times\times 2\,7\,5 \\ 134\overline{)\,3\,6\,8\,7\,5} \\ -\,2\,6\,8\downarrow \\ \hline 1\,0\,0\,7 \\ -\,9\,3\,8\downarrow \\ \hline 6\,9\,5 \\ -\,6\,7\,0 \\ \hline 2\,5 \end{array}$$

∴ **The answer is – (c) 25**

6. Jane has been collecting different kinds of rocks for 11 years. Each year she collected 24659 rocks. How many rocks did she collect through all 11 years?

No. of years = 11

No. of rocks per year = 24659

∴ No. of rocks collected in all = 24659 × 11

$$\begin{array}{r} \overset{5}{\cancel{2}}\ \overset{7}{\cancel{4}}\ \overset{6}{\cancel{6}}\ \overset{9}{\cancel{5}}\ 9 \\ \times\ 1\ 1 \\ \hline \mathbf{2\ 7\ 1\ 2\ 4\ 9} \end{array}$$

∴ **Ans – 271249 rocks**

7. Mr Hari bought a televison that costs ₹68,7400. Each month he pays ₹2455 as EMI. In how many months will the payment be cleared?

Cost of television = ₹687400

Monthly EMI payment = ₹2455

∴ Months required to clear payment.

₹ 687400 ÷ ₹ 2455

∴ It would take 280 months = 23 years 4 months to were up the payment.

$$\begin{array}{r} 2\,8\,0 \\ 2455\overline{)\,6\,8\,7\,4\,0\,0} \\ -\,4\,9\,1\,0\downarrow \\ \hline 1\,9\,6\,4\,0 \\ -\,1\,9\,6\,4\,0\downarrow \\ \hline \times\,0 \end{array}$$

Ans : 280 months

8. Divide 14367 by 14 using long division method.

14367 ÷ 14

$$\begin{array}{r} 1\,0\,2\,6 \\ 14\overline{)\,1\,4\,3\,6\,7} \\ -\,1\,4\ \downarrow \\ \hline 3\,6 \\ -\,2\,8\downarrow \\ \hline 8\,7 \\ -\,8\,4 \\ \hline 3 \end{array}$$

Quotient = 1026

Remainder = 3

Ans: 1026 with remainder 3

Chapter-4 Estimation of Numbers

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Rounding off a number to nearest 10,100 and 100 and highest place Estimation of sum, difference and product	Learners will be able to round off numbers and estimate the sum, difference and product.	Ask the students to round off a given number The students my be given an example like 365 students attended the assembly. Approximately how many students attended.	On day 1 259 people attended a show and on day 2 232 people attended the show. Estimate the number of people attended the show in total of two days.

Exercise 1.4

1. Round off the numbers.

(a) Food to be arranged for 378 guests at a party (nearest hundreds)
378 rounded to nearest hundred is 400
$\therefore$ Food to be arranged for 400 guests.

(b) Population of a town 30,65,301 (nearest thousand)
3065301 to nearest thousand is 30,65,000
$\therefore$ Population of a town is 3065000.

(c) Number of fishes in a pond is 25,342 (nearest thousand)
25,342 to nearest thousand is 25,000
$\therefore$ Number of fishes in a pond is 25,000

2. Round off the following numbers to nearest tens and hundreds.

(a) 645
Nearest tens = 650
Nearest hundreds = 600

(b) 4532 rounded off to
Nearest tens = 4530
Nearest hundreds = 4500

(c) 2092 rounded off to
Nearest tens = 2090
Nearest hundreds = 2100

3. Round off the following numbers to nearest thousand and ten thousand.

(a) 182433 rounded to
Nearest thousand = 182000
Nearest hundreds = 180000

(b) 33477 rounded off to
Nearest thousand = 33000
Nearest ten thousand = 30000

4. Round off 35,86,345 to nearest lakh and ten lakh.

3586345 to nearest lakhs = 36,00,000

to nearest ten lakhs = 40,00,000

5. Round off 37,811 to nearest ten thousand.

37811 to nearest ten thousand = 40,000

6. Round off the following numbers to nearest crore

(a) 46534800

4,65,34,800 to nearest crore is 5,00,00,000

(b) 76678200

7,66,78,200 to nearest crore is 8,00,00,000

7. Round off the numbers to its highest place.

(a) 1000220

1000220 rounded to its highest place = 10,00,000

(b) 322356

3,22,356 rounded to its highest place = 3,00,000

(c) 3313467

33,13,467 rounded to its highest place = 30,00,000

(d) 578215

5,78,215 rounded to its highest place = 6,00,000

Exercise 4.2

1. Estimate the sum of 5678986; 4523765, and 6127201 to the nearest lakh.

56,78,986 to nearest lakh =

45,23,765 to nearest lakh =

61,27,201 to nearest lakh =

Estimated sum =

	57,00,000
	45,00,000
+	61,00,000
	1,63,00,000

2. Estimate the difference between 32292 and 277272 to nearest ten thousand.

2,77,272 to nearest ten thousand =

32,292 to nearest ten thousand =

Estimated Difference =

	2,80,000
+	30,000
	2,50,000

3. Estimate the product of the numbers 7887000 and 672 to their highest places.

7887000 to highest place = 80,00,000

672 to highest place = 700

Product Estimated = 80,00,000 × 700

= 5,60,00,00,000

4. A company makes a profit of ₹1,48,78,924 in the first half of the year 2020. In the second half of the year, it makes a profit of ₹2,95,98,982. Estimate the total profit earned by the company in the year 2020 to nearest hundred.

Estimated profit of first half year	=	1, 4 8, 7 8, 9 0 0
Estimated profit of second half year	=	+ 2, 9 5, 9 9, 0 0 0
Estimated profit total	=	4, 4 4, 7 7, 9 0 0

5. A toy factory is clearning its stock at the end of a financial year. It had 28245 toys and managed to sell off 1325 toys. What stock of toys is still left in the factory to nearest ten?

Estimated toys in the shop	=	2 8, 2 5 0
Estimated toys in sold the shop	=	– 1, 3 3 0
Estimated toys left	=	2 6, 7 2 0

Estimated toys 26,920 toys are left in the shop.

SELF ASSESSMENT-4

Choose the correct options. (Questions 1 to 5)

1. 1234 rounded off to the nearest 10 is: **1230**
   Ans : option (c)
2. 52967 rounded off to the nearest ten thousand is: **59000**
   Ans : option (c)
3. **Sushmita bought a chocolate for ₹180, then the round off price will be _____**
   round off price of ₹180 is ₹280
   Ans : option (b)
4. **The cost of a house is ₹58,55,505, we can say the rounded off price to the nearest thousand is _____.**
   ₹58,55,505 to nearest thousand is 58,56,000
   Ans : option (b)
5. **The number 2,46,825 when rounded off to its highest place is**
   2,46,825 rounded to highest place is 2,00,000
   Ans : option (c)
6. **Round of 4,26,562 to nearest thousand, ten thousand and lakh.**
   4,26,562 to
   nearest thousand = 4,27,000
   nearest thousand = 4,30,000
   nearest lakh = 4,00,000

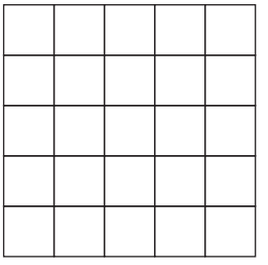
7. Estimate the sum of 2,46,483 and 4,34,800 rounded lakhs.

2,46,483 to nearest lakh = 2,00,000
4,34,800 to nearest lakh = 4,00,000
Estimated sum = 2,00,000 + 4,00,000
= 6,00,000

8. Estimate the product of 2134 × 1259 to nearest thousand.

2134 to nearest thousand is 2000
1259 to nearest thousand 1000
Estimated product = 2000 × 10000
= 20,00,000

Chapter-5 Factors and Multiples

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Factors and multiples, prime and composite numbers. Prime factorization HCF and LCM	Learners will be able to identify prime and composite numbers.	Worksheet involving prime and composite number to be done. eg. circle the prime numbers 	132 a prime number?
	They will be able to field out the factors and multiples of a given number	The students can be asked to give the factors of a given number or multiples.	Write down the factors and 1st 3 multiples of 32
	They will be able to find out the highest common factor and Least common multiple.	Worksheet on HCF and LCM to be done is class	Find out the LCM and HCF of 12 and 84.

Exercise 5.1

1. Find all the factors of the following numbers.

(a) 25 factors of 25 : 1, 5 and 25
(b) 48 factors of 48 : 1, 2, 3, 4, 6, 8, 12, 16, 24 and 48
(c) 36 factors of 36 : 1, 2, 3, 4, 6, 9, 12, 18 and 36
(d) 72 factors of 72 : 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36 and 72

2. Write the first 3 multiples of

(a) first 3 multiples of 30 : 30, 60, 90

(b) first 3 multiples of 12 : 12, 24, 36

(c) first 3 multiples of 23 : 23, 46, and 69

(d) first 3 multiples of 16 : 16, 32 and 348

3. Which of these numbers on the left are divisible by the numbers at the top of each column.

Write Yes or No beside each number.

Numbers	By 2	By 3	By 4	By 5	By 6	By 7	By 8	By 9
36	Yes	Yes	Yes	No	Yes	No	No	Yes
144	Yes	Yes	Yes	No	Yes	No	Yes	Yes
3045	No	Yes	No	Yes	No	Yes	No	No
1000	Yes	No	Yes	Yes	No	No	Yes	No
76243	No	No	No	No	No	No	No	No
52340	Yes	No	Yes	Yes	No	No	No	No

Exercise 5.2

1. Circle the prime numbers from the given numbers

(2), 75, (67), (23), 4, (5), (89), 87, 99

2. Write any 3 pairs of twin prime numbers.

(3,5), (5,7) and (11,13) are turn prime numbers

3. Is (8,15) a co-prime number? Give reason for your answer.

Yes, since 1 is the only factor common to them.

4. Write all composite number between 17 to 26.

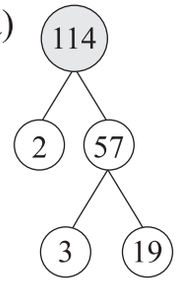
Composite numbers between 17 to 26 : 18, 20, 21, 24 and 25

5. Write all prime numbers between 52 to 67.

Prime numbers between 52 to 67 = 53, 59, 61

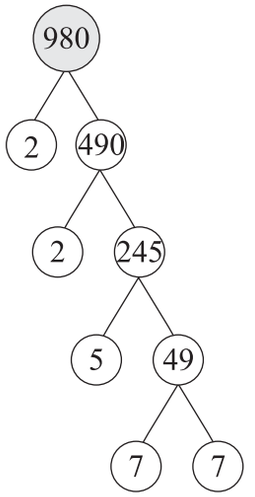
6. Find the prime factorisation using the factor tree method.

(a)



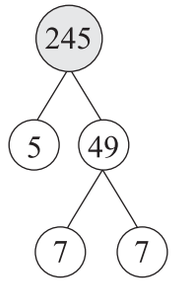
$2 \times 3 \times 19$

(b)



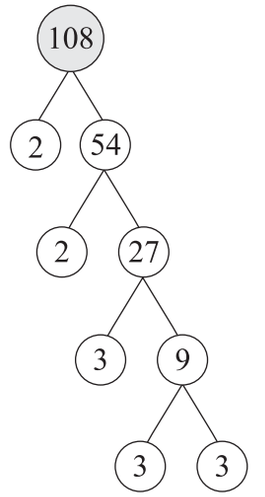
$2 \times 2 \times 5 \times 7 \times 7$

(c)



$5 \times 7 \times 7$

(d)



$2 \times 2 \times 3 \times 3 \times 3$

7. Find the prime factorisation using division method.

(a) 406

2	406
7	203
29	29
	1

Ans: 2 × 7 × 29

(b) 498

2	498
3	249
83	83
	1

Ans: 2 × 3 × 83

(c) 305

5	305
61	61
	1

Ans: 5 × 61

(d) 196

2	196
2	98
7	49
7	7
	1

Ans: 2 × 2 × 7 × 7

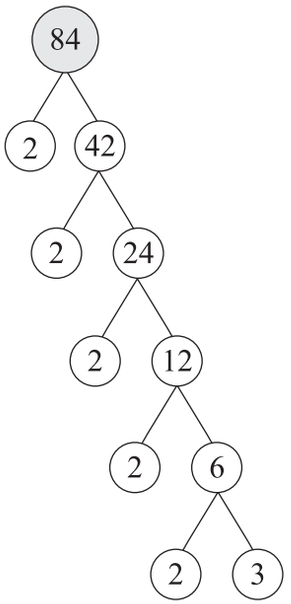
8. Circle the composite numbers from the given numbers.

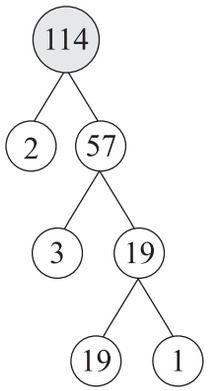
5, 3, (14), (36), 19, (18), (27), (85)

Exercise 5.3

1. Find the HCF using factor listing method

(a) 84 and 114



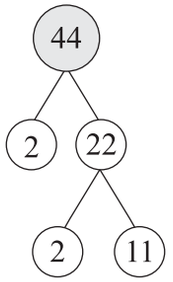


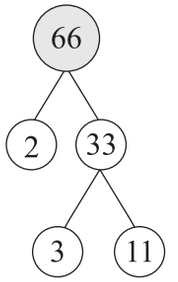
$84 = (2) \times 2 \times 2 \times 2 \times (3)$

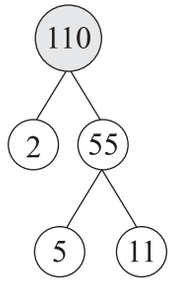
Common factor $= 2 \times 3 = 6$

$114 = (2) \times (3) \times 19$

(b) 44, 66, 110







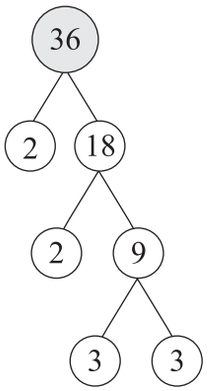
$44 = (2) \times 2 \times (11)$

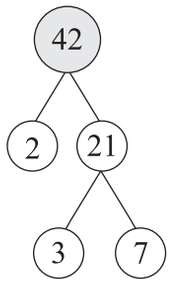
$66 = (2) \times 3 \times (11)$

$110 = (2) \times 5 \times (11)$

HCF $= 2 \times 11 = 22$

(c) 36 and 42

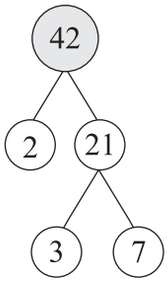


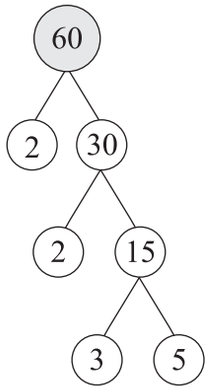


$36 = 2 \times 2 \times 3 \times 3$
$42 = 2 \times 3 \times 7$

HCF = $2 \times 3 = 6$

(d) 42 and 60





$36 = 2 \times 2 \times 3 \times 3$
$42 = 2 \times 3 \times 7$

HCF = $2 \times 3 = 6$

2. Find the HCF using prime factorisation method.

(a) 102, 68, 136

2	102
3	51
17	17
	1

2	68
3	34
17	17
	1

2	36
2	68
2	34
17	17
	1

$102 = 2 \times 3 \times 17$
$68 = 2 \times 2 \times 17$
$136 = 2 \times 2 \times 17 \times 2$

HCF = $2 \times 17 = 34$

(b) 120 and 168

2	120
2	60
1	30
3	15
5	5
	1

2	168
2	84
2	42
3	21
7	7
	1

$120 = 2 \times 2 \times 2 \times 3 \times 5$
$168 = 2 \times 2 \times 2 \times 3 \times 7$

HCF = $2 \times 2 \times 2 \times 3 = 24$

(c) 49, 98

$$\begin{array}{r|l} 7 & 49 \\ \hline 7 & 7 \\ \hline & 1 \end{array} \qquad \begin{array}{r|l} 2 & 98 \\ \hline 7 & 49 \\ \hline & 7 \end{array}$$

$49 = (7) \times 7$
$98 = (7) \times 2$

HCF = $7 \times 7 = 49$

(d) 60 and 90

$$\begin{array}{r|l} 2 & 60 \\ \hline 2 & 30 \\ \hline 3 & 15 \\ \hline & 5 \end{array} \qquad \begin{array}{r|l} 2 & 90 \\ \hline 5 & 45 \\ \hline 3 & 9 \\ \hline 3 & 3 \end{array}$$

$60 = 2 \times 2 \times 3 \times 5$
$90 = (2) \times 5 \times (3) \times 3$

HCF = $2 \times 3 \times 5 = 30$

3. Find the HCF using division method.

(a) 56, 42, 98

$$\begin{array}{r|l} 56 & 98 \\ & 56 \\ \hline 42 & 56 \\ & 42 \\ \hline 14 & 42 \\ & 42 \\ & \times \end{array} \qquad \begin{array}{r|l} 14 & 42 \\ & 42 \\ & \times \end{array}$$

HCF = 14

(b) 80, 16, 96

$$\begin{array}{r|l} 80 & 96 \\ & 80 \\ \hline 16 & 80 \\ & 80 \\ \hline 16 & 80 \\ & 80 \\ & \times \end{array} \qquad \begin{array}{r|l} (16) & 16 \\ & 16 \\ & \times \end{array}$$

HCF = 16

(c) 158 and 200

$$
\begin{array}{r}
158\overline{)200}(1\\
158\\
\hline
42\overline{)158}(3\\
126\\
\hline
32\overline{)42}(1\\
32\\
\hline
10\overline{)32}(3\\
30\\
\hline
2\overline{)10}(5\\
10\\
\hline
\times
\end{array}
$$

HCF = 2

(d) 495 and 945

$$
\begin{array}{r}
495\overline{)945}(1\\
495\\
\hline
450\overline{)495}(1\\
450\\
\hline
45\overline{)450}(10\\
450\\
\hline
\times
\end{array}
$$

HCF = 45

Exercise 5.4

1. Find the LCM using factorization method.

(a) 15, 12 and 40

$$
\begin{array}{r|l}
3 & 15\\
5 & 15\\
\hline
 & 1
\end{array}
\qquad
\begin{array}{r|l}
2 & 2\\
2 & 6\\
3 & 3\\
\hline
 & 1
\end{array}
\qquad
\begin{array}{r|l}
2 & 40\\
2 & 20\\
2 & 10\\
\hline
 & 5
\end{array}
$$

Occurrence in 15	0 line	1 line	1 line
Occurrence in 12	2 lines	1 line	0 line
Occurrence in 40	3 lines	0 line	1 line

So taking maximum occurrence $= 2 \times 2 \times 2 \times 3 \times 5$

$= 120$

$\therefore$ LCM = **120**

(b) 14, 21 and 7

2	14	3	21	7	7
7	7	7	7		1
	1		1		

maximum occurrence of 2 is 1 time, 3 is 1 time, 7 is 1 times

LCM = $2 \times 3 \times 7$

$\therefore$ LCM = 42

2. Find the LCM using short division method.

(a) 9, 13 and 26

2	9, 13, 26
3	9, 13, 13
3	3, 13, 13
13	1, 13, 13
	1, 1, 1

LCM = $2 \times 3 \times 3 \times 13$

= 234

(b) 158 and 200

2	158, 200
2	79, 100
2	79, 50
5	79, 25
5	79, 5
79	79, 1
	1, 1

LCM = $2 \times 2 \times 2 \times 5 \times 5 \times 79$

= 15800

(c) 30 and 40

2	30, 40
2	15, 20
2	15, 10
3	5, 15
5	5, 5
	1, 1

LCM = $2 \times 2 \times 2 \times 3 \times 5$

= 120

(d) 16, 48 and 144

2	16, 48, 144
2	8, 24, 72
2	4, 12, 36
2	2, 6, 18
3	1, 3, 9
3	1, 1, 3
	1, 1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 3 \times 3$

= 144

3. The HCF of 2 numbers is 3 and LCM is 90. If one number is 18, find the other number.

HCF = 3 and LCM = 90

1st number = 18

1st number $\times$ second number = HCF $\times$ LCM

second number = $\frac{\text{HCF} \times \text{LCM}}{\text{1st number}}$

= $\frac{3 \times 90}{18}$ $\begin{matrix} 30 \\ 6 \\ 3 \end{matrix}$ 15

= 15

$\therefore$ The other number is 15

4. The HCF and LCM of two number is 3 and 54 respectively. If one of the numbers is 27, find the other number.

HCF = 3 and LCM = 54

1st number = 29

$$\text{2nt number} = \frac{\text{HCF} \times \text{LCM}}{\text{1st number}}$$

$$= \frac{3 \times 54}{29}$$

$$= 6$$

$\therefore$ The other number is 6

5. Find the least number which when divided by 6, 15 and 18 leaves remainder 5 in each case.

2	6, 15, 18
3	3, 15, 9
3	1, 5, 3
5	1, 5, 1
	1, 1, 1

LCM = 2 × 3 × 3 × 5

= 90

90 is the least number which when divided by 6, 15 and 18 leaves no remainder but we need a number which will leave remainder 5 in each case, So the number is 90 + 5 = 95.

6. Find the lowest number which is less by 5 to be divided by 16, 24 and 36 exactly.

2	16, 24, 36
2	8, 12, 18
2	4, 6, 9
2	2, 3, 9
3	1, 3, 9
3	1, 1, 3
	1, 1, 1

LCM = 2 × 2 × 2 × 2 × 3 × 3

= 144

144 is exactly divisible 1 so the lowest number which is less by 5 is 144–5 = 139.

7. Find the lowest number which leaves 3 as remainder when divided by 8, 12 and 16.
[Hint: Find LCM of 8, 12 and 16 and add 3 to the LCM]

2	8, 12, 16
2	4, 6, 8
2	2, 3, 4
2	1, 3, 2
3	1, 3, 1
	1, 1, 1

LCM = 2 × 2 × 2 × 2 × 3

= 48

Required = 48 + 3 = 51

SELF ASSESSMENT-5

Choose the correct options. (Questions 1 to 7)

1. **Which of the following is an odd composite number?**
   9 and 14 are composite number by 9 is odd
   Ans: option (a)
2. **Which of the following is a prime number?**
   89 is a prime number
   Ans : option (a)
3. **Which of the following is divisible by 3?**
   60762 is divisible by 3.
   Ans : option (d)
4. **Which of the following is a twin prime number?**
   59, 61 is twin prime
   Ans : option (d)
5. **The HCF of 14 and 24.**

$$\begin{array}{r|l} 2 & 14 \\ 7 & 7 \\ \hline & 1 \end{array} \qquad \begin{array}{r|l} 2 & 24 \\ 2 & 12 \\ 2 & 6 \\ 3 & 3 \\ \hline & 1 \end{array}$$

$14 = \textcircled{2} \times 7$
$24 = \textcircled{2} \times 2 \times 2 \times 3$

HCF = 2
Ans : option (b)

6. **The LCM of 30 and 45 is _____.**

$$\begin{array}{r|l} 2 & 30, 45 \\ 3 & 15, 45 \\ 3 & 5, 15 \\ 5 & 5, 5 \\ \hline & 1, 1 \end{array}$$

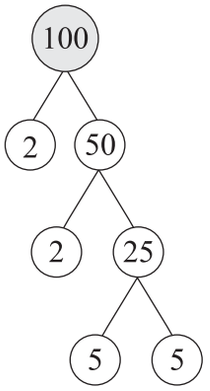
LCM = $2 \times 3 \times 3 \times 5 = 90$
Ans : option (a)

7. **Which of the following is a multiple of 60.**
   120 is a multiple of 60
   Ans: Option (c)

8. **Find the HCF of 78 and 198 by division method.**

$$\begin{array}{r} 78\overline{)198}(1 \\ -156 \\ \hline 42\overline{)78}(1 \\ -42 \\ \hline 36\overline{)42}(1 \\ -36 \\ \hline \textcircled{6}\overline{)36}(6 \\ -36 \\ \hline \times \end{array}$$

9. Fill in the circle with the factors.



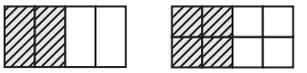
10. The product of two numbers is 1440. If HCF is 6, find the LCM.

$$\text{LCM} = \frac{\text{Product of 2 numbers}}{\text{HCF}}$$

$$\text{LCM} = \frac{1440}{6}$$

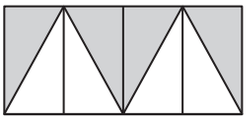
$$= 240$$

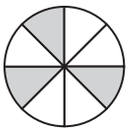
Chapter-6 Fractions

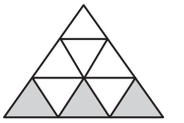
Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Concept of fraction, Types of fractions (Like, unlike, unit, proper, improper, mixed and equivalent fractions)	The students will be able to identify the types of fractions and will be able to convert improper to mixed fraction and vice-verca. The students will also be able to find equivalent fractions.	Worksheets based on conversion of fractions/ shading of fraction can be done. Activity based on equivalent fractions can be done.  $\frac{2}{4}$ $\frac{4}{8}$ These are equivalent fractions.	Is $\frac{8}{16}$ and $\frac{4}{8}$ equivalent fractions? Fill in the boxes. 1) $\frac{8}{2} = \frac{\square}{4}$ 2) $\frac{\square}{18} = \frac{3}{9}$
Expressing fractions in lowest terno, comparison and ordering of fractions.	The students will be able to reduce a fraction to its lowest form and also will be able to compare and arrange (descending and ascending order fractions)	Worksheet based on comparison and ordering can be done.	is $\frac{8}{2} > \frac{6}{4}$? Arrange in ascending order $\frac{1}{4}, \frac{2}{3}, \frac{6}{4}$
Addition and Subtraction of fractions. Word problem	The students will be able to add/subtract fractions . They will be able to solve word problem based on real-like season	Worksheet on Addition, Subtraction and word problems to be done.	Anil at $\frac{1}{2}$ of a pizza and Sunil at $\frac{1}{4}$ of a pizza. What fraction of pizza is left? Solve: $1\frac{1}{2}+\frac{3}{4}-\frac{1}{2}$

Exercise 6.1

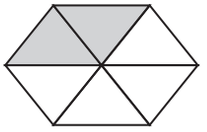
1. Write the fraction of the shaded part for each of the following figures

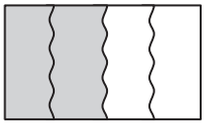
(a)  $\boxed{\frac{4}{8}}$

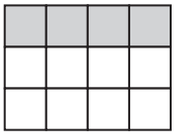
(b)  $\boxed{\frac{3}{8}}$

(c)  $\boxed{\frac{3}{9}}$

2. Shade the parts of the following figures according to the given fractions.

(a)  $\frac{2}{6}$

(b)  $\frac{2}{4}$

(c)  $\frac{4}{12}$

3. Complete the table.

	Numerator	Denominator	Fraction
(a)	2	7	$\boxed{\frac{2}{7}}$
(b)	$\boxed{4}$	15	$\frac{4}{15}$
(c)	17	19	$\boxed{\frac{17}{19}}$
(d)	13	$\boxed{42}$	$\frac{13}{42}$
(e)	6	19	$\boxed{\frac{6}{19}}$

Exercise 6.2

1. Convert the following improper fraction into mixed fraction.

(a) $\frac{11}{6}$

$6\overline{)11}\,(1$
$\underline{-6}$
5

$= \frac{5}{6}$

(b) $\frac{800}{17}$

$17\overline{)800}\,(47$
$\underline{-68\downarrow}$
120
$\underline{119}$
1

$= 47\frac{1}{17}$

(c) $\frac{27}{5}$

$5\overline{)27}\,(5$
$\underline{-25}$
$\times 2$

$= 5\frac{2}{5}$

(d) $\frac{42}{18}$

$18\overline{)42}\,(2$
$\underline{-36}$
6

$= 2\frac{\cancel{6}^{1}}{\cancel{18}_{3}}$

$= 2\frac{1}{3}$

2. Convert the following mixed fractions into improper fraction.

(a) $2\frac{7}{8}$ $= \frac{23}{8}$ (b) $13\frac{2}{5}$ $= \frac{67}{5}$ (c) $8\frac{6}{7}$ $= \frac{62}{7}$ (d) $9\frac{12}{13}$ $= \frac{129}{13}$

3. Write 3 equivalent fractions of $\frac{7}{11}$

To find equivalent fraction we can either multiply or divide with the same common number.

$\frac{7}{11}\times\frac{2}{2}=\frac{14}{12}$ $\frac{7}{11}\times\frac{3}{3}=\frac{21}{33}$ $\frac{7}{11}\times\frac{4}{4}=\frac{28}{44}$

$\therefore \frac{14}{22}+\frac{21}{33}+\frac{28}{44}$ are equivalent fractions of $\frac{7}{11}$.

4. Find out the lower order equivalent fraction of $\frac{2}{8}$.

To find lower order equivalent fraction of $\frac{2}{8}$ we divide the number by same common factor.

$$\frac{2}{8}\div\frac{2}{2}=\frac{1}{4}$$

$$\text{Ans}: \frac{1}{4}$$

5. Use >, < or =.

(a) $\frac{2}{5} \boxed{<} \frac{6}{8}$ $\because\ 2\times 8 < 6\times 5$

(b) $\frac{1}{9} \boxed{=} \frac{1}{9}$

(c) $\frac{2}{6} \boxed{<} \frac{5}{2}$ $\because\ 2\times 2 < 5\times 6$

(d) $2\frac{1}{2} \boxed{<} 7\frac{1}{3}$ $\frac{5}{2}$ and $\frac{22}{3} = 5\times 3\times 2\times 22$

6. Arrange the following in ascending order.

(a) $\frac{5}{6}, \frac{2}{7}, \frac{3}{21}$

L.C.M of $6, 7, 21 = 42$

$\frac{5}{6}\times\frac{7}{7}=\frac{35}{42}$; $\frac{2}{7}\times\frac{6}{6}=\frac{12}{42}$; $\frac{3}{21}\times\frac{2}{2}=\frac{6}{42}$

$\frac{6}{42}<\frac{12}{42}<\frac{35}{42}$

$\therefore\ \frac{3}{21}<\frac{2}{7}<\frac{5}{6}$

(b) $\frac{5}{6}, \frac{7}{8}, \frac{5}{9}$

L.C.M of $= 72$

$\frac{5}{6}\times\frac{12}{12}=\frac{60}{72}$

$\frac{7}{8}\times\frac{9}{9}=\frac{63}{72}$

$\frac{5}{9}\times\frac{8}{8}=\frac{40}{72}$

$\frac{40}{72}, \frac{60}{72}, \frac{63}{72}$

$\frac{5}{9}<\frac{5}{6}<\frac{7}{8}$

(c) $\frac{3}{4}, \frac{5}{6}, \frac{7}{9}$

L.C.M of $= 36$

$\frac{3}{4} \times \frac{9}{9} = \frac{21}{36}$

$\frac{5}{6} \times \frac{6}{6} = \frac{30}{36}$

$\frac{7}{9} \times \frac{4}{4} = \frac{28}{36}$

$\frac{27}{36} < \frac{28}{36} < \frac{30}{36}$: $\frac{3}{4} < \frac{7}{9} < \frac{5}{6}$ **Ans.**

7. Arrange the following in descending order.

(a) $\frac{2}{5}, \frac{1}{3}, \frac{3}{10}$

L.C.M $= 30$

$\frac{2}{5} \times \frac{6}{6} = \frac{12}{30}$

$\frac{1}{3} \times \frac{10}{10} = \frac{10}{30}$

$\frac{3}{10} \times \frac{3}{3} = \frac{9}{30}$

$\frac{12}{30}, \frac{10}{30}, \frac{9}{30}$ $\therefore \frac{2}{5} > \frac{1}{3} > \frac{3}{10}$

(b) $\frac{2}{5}, \frac{3}{2}, \frac{1}{4}$

L.C.M $= 20$

$\frac{2}{5} \times \frac{4}{4} = \frac{8}{20}$ $\frac{30}{20} > \frac{8}{20} > \frac{5}{10}$

$\frac{3}{2} \times \frac{10}{10} = \frac{30}{20}$ $\therefore \frac{3}{2} > \frac{2}{5} > \frac{1}{4}$

$\frac{1}{4} \times \frac{5}{5} = \frac{5}{20}$

(c) $\frac{4}{5}, \frac{7}{10}, \frac{11}{15}$

L.C.M $= 30$

$\frac{4}{5} \times \frac{6}{6} = \frac{24}{30}$ $\frac{7}{10} \times \frac{3}{3} = \frac{21}{30}$ $\frac{11}{15} \times \frac{2}{2} = \frac{22}{30}$

$\frac{24}{30} > \frac{21}{30} > \frac{21}{30}$

$\therefore \frac{7}{10} > \frac{11}{15} > \frac{4}{5}$ **Ans.**

8. Reduce the following fractions to its simplest form.

(a) $\frac{\cancel{25}^{5}}{\cancel{60}_{12}} = \frac{5}{12}$

(b) $\frac{\cancel{14}^{7}}{\cancel{18}_{9}} = \frac{7}{9}$

(c) $\frac{\cancel{45}^{9}}{\cancel{50}_{10}} = \frac{9}{10}$

(d) $\frac{\cancel{30}^{6}}{\cancel{35}_{7}} = \frac{6}{10}$

(e) $\frac{12}{7} = \frac{12}{7}$ (It is already is reduced four)

Exercise 6.3

1. Solve the following like fractions.

(a) $\frac{6}{13} + \frac{4}{13}$

$= \frac{6+4}{13} = \frac{10}{13}$

(b) $\frac{5}{8} - \frac{3}{8}$

$\frac{5}{8} - \frac{3}{8} = \frac{\cancel{2}^{1}}{\cancel{8}_{4}} = \frac{1}{4}$

(c) $\frac{13}{80} - \frac{11}{80}$

$= \frac{13-11}{80} = \frac{\cancel{2}^{1}}{\cancel{80}_{40}} = \frac{1}{40}$

(d) $\frac{3}{19} + \frac{14}{19}$

$\frac{3+14}{19} = \frac{17}{19}$

2. Add the following.

(a) $\frac{2}{7} + \frac{3}{5}$

$= \frac{10-21}{35}$

$= \frac{31}{35}$

(b) $7\frac{5}{12} + 2\frac{1}{2}$

$\frac{88}{12} + \frac{5}{2}$

$= \frac{88+30}{12} = \frac{\cancel{118}^{59}}{\cancel{12}_{6}} = \frac{59}{6} = 9\frac{5}{6}$

(c) $8\frac{9}{10} + 3\frac{1}{5}$

$= \frac{89}{10} + \frac{16}{5}$

$= \frac{89+32}{10}$

$= \frac{121}{10}$

$= 12\frac{1}{10}$

(d) $\frac{4}{12} + \frac{3}{8}$

$= \frac{8+9}{24}$

$= \frac{17}{24}$

3. Subtract.

(a) $\frac{4}{6} - \frac{1}{12}$

$= \frac{8-1}{12}$

$= \frac{7}{12}$

(b) $\frac{9}{3} - \frac{3}{8}$

$= \frac{72-3}{24}$

$= \frac{\cancel{68}\ \cancel{34}^{17}}{\cancel{24}\ \cancel{12}_{6}} = \frac{17}{6} = 2\frac{5}{6}$

(c) $20\frac{3}{4} - 18\frac{2}{3}$

$= \frac{83}{4} - \frac{56}{3}$

$= \frac{249-224}{12}$

$= \frac{25}{12} = 2\frac{1}{12}$

(d) $9\frac{1}{5} - 5\frac{4}{6}$

$= \frac{46}{5} - \frac{34}{6}$

$= \frac{276-170}{30}$

$= \frac{\cancel{106}\ \cancel{54}^{18}}{\cancel{30}_{15_5}} = \frac{18}{5} = 3\frac{3}{5}$

4. Simplify.

(a) $1\frac{7}{8}+1\frac{1}{2}+1\frac{3}{4}$

$=\frac{15}{8}+\frac{3}{2}+\frac{7}{4}$

$=\frac{15+12+14}{8}$

$=\frac{41}{9}$

$=5\frac{1}{8}$

(b) $\frac{4}{7}+1\frac{2}{7}+\frac{3}{14}$

$=\frac{4}{7}+\frac{9}{7}-\frac{3}{14}$

$=\frac{8+18-3}{14}$

$=\frac{23}{14}=1\frac{9}{14}$

(c) $7+1\frac{1}{3}-\frac{2}{6}$

$=\frac{7}{1}+\frac{4}{3}-\frac{2}{6}$

$=\frac{42+8-2}{6}$

$=\frac{\cancel{48}^{8}}{\cancel{6}}$

$=8$

5. Ron spent $\frac{3}{5}$ of his money on books and spent $\frac{2}{7}$ of his money on stationery. What fraction of money is did Ron spend?

Fraction of money spent on books $=\frac{3}{5}$

Fraction of money spent on stationery $=\frac{2}{7}$

Total Fraction of money spent $=\frac{3}{5}+\frac{2}{7}$

$=\frac{21+10}{35}=\frac{31}{35}$

$\therefore \frac{31}{35}$ part of money was spent in all.

6. $\frac{3}{5}$ of a birthday cake was used for a party. Mary ate $\frac{1}{3}$ of the cake in the morning. How much cake is still left?

Fraction of birthday cake used $=\frac{5}{8}$

Fraction of cake Mary ate $=\frac{1}{3}$

Fraction of birthday cake left $=\frac{5}{8}-\frac{1}{3}$

$=\frac{15-8}{24}=\frac{7}{24}$

$\therefore \frac{7}{24}$ fraction of cake is left.

7. Jyoti takes $2\frac{2}{5}$ minutes to walk to the market while Sunita takes $\frac{1}{3}$ minutes to do the same. Who takes less time and by how much?

$\text{Time taken by Jyoit} = 2\frac{2}{5}\ \text{mins} = \frac{12}{5}\text{mins}$

$\text{Time take by Sunita} = 2\frac{1}{4}\ \text{mins} = \frac{9}{4}\text{mins}$

$\text{Comparing}\ \frac{12}{15}\ \text{and}\ \frac{9}{4}\ \text{we see}\ 12\times4>9\times5 \quad \therefore \frac{12}{5}\ \text{is greater}$

$\therefore \text{Jyoti takes more time by}\left(\frac{12}{5}-\frac{9}{4}\right)\text{mins}$

$= \frac{48-45}{20} = \frac{3}{20}\text{mins}$

8. The sum of two fractions is $5\frac{7}{10}$. If one of the fractions is $4\frac{1}{2}$, find the other fractions.

$\text{Sum of two fraction} = 5\frac{7}{10} = \frac{57}{10}$

$\text{One of the fraction} = 4\frac{1}{2} = \frac{9}{2}$

$\text{Other fraction} = \frac{57}{10}-\frac{9}{2}$

$= \frac{57-45}{10} = \frac{\cancel{12}^{6}}{\cancel{10}_{5}} = 1\frac{1}{5}$

$\therefore \text{The other number is}\ 1\frac{1}{5}$

SELF ASSESSMENT-6

Choose the correct options.

1. In the adjoining figure, the shaded region is represent by 

Ans : option (b)

2. The fraction equivalent to $\frac{6}{7}$ is

$\frac{18}{21}\ \text{is equivalent to}\ \frac{6}{7}$

Ans : option (b)

3. A pair of like fractions

$\frac{3}{7}, \frac{18}{7}\ \text{is a pair of like fraction}$

Ans : option (b)

4. Which of the following fractions is the greatest?

$\frac{4}{7}$ is the greatest fraction

Ans : option (b)

5. The fraction with numerator 14 and denominator 35.

Ans : $\frac{14}{35}$ option (b)

6. Anshula eats $\frac{2}{7}$ of a pizza. What fraction of pizza is left ?

Fraction of pizza left $= 1-\frac{2}{7}$

$= \frac{7-2}{7}=\frac{5}{7}$

Ans: option (b)

7. Find the sum of $\frac{2}{7}, \frac{4}{3}, \frac{8}{2}$

$\frac{2}{7}+\frac{4}{3}+\frac{8}{2}$

$= \frac{6+56+168}{42}$

$= \frac{\cancel{230}^{115}}{\cancel{42}_{21}}=\frac{115}{21}=5\frac{13}{21}$

8. Subtract $\frac{5}{18}$ from $\frac{7}{9}$

$\frac{7}{9}-\frac{5}{18}$

$= \frac{14-5}{18}=\frac{\cancel{9}^{1}}{\cancel{18}_{2}}=\frac{1}{2}$

9. Solve $\frac{5}{4}-\frac{3}{5}+\frac{11}{2}$

$\frac{5}{4}-\frac{3}{5}+\frac{11}{2}$

$= \frac{25-12+110}{20}$

$= \frac{123}{20}=6\frac{3}{20}$

10. Is $\frac{4}{7}>\frac{2}{16}$?

$\frac{4}{7}>\frac{2}{16}=?$

Checking by cross product

$= 4\times16$ and 7×2

$= 64>14$

$\therefore \frac{4}{7}$ is greate than $\frac{2}{16}$

$\therefore$ **Ans:** Yes.

Chapter-7 More on Fractions

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Multiplication of fraction by whole numbers and fraction by a fraction	The learners will be able to multiply fractions	Conducting activities for multiplication of fraction as operation 'of' For example, $\frac{1}{2}\times\frac{1}{3}$ is half of one third.	Solve: $1\frac{1}{3}\times\frac{3}{4}$ of $\frac{13}{9}$

Division of fraction whole number by a fraction, fraction by a fraction	The learners will be able to perform division of fractions	Explain to the children the idea of that division of a fraction by whole number is number of times the divisor lies in divided. For example, $\frac{1}{2}\times\frac{1}{4}$ means number of $\frac{1}{4}$ in $\frac{1}{2}$ i.e 2.	Solve: $\left(\frac{3}{7}+\frac{1}{3}\right)\div\frac{1}{21}$

Exercise 5.2

1. Multiply.

(a) $\frac{4}{6}\times 4$

$\frac{4}{\cancel{6}_{3}}\times \cancel{4}^{2}$

$=\frac{8}{3}=2\frac{2}{3}$

(b) $\frac{5}{7}\times 14$

$\frac{5}{\cancel{7}_{1}}\times \cancel{14}^{2}$

$=10$

(c) $\frac{6}{7}\times 12$

$\frac{6}{7}\times 12$

$=\frac{72}{7}=10\frac{2}{7}$

(d) $\frac{2}{3}\times 3\frac{1}{5}$

$\frac{11}{\cancel{22}_{\cancel{2}_{1}}}\times \cancel{44}^{\cancel{4}^{2}}$

$=22$

2. Multiply the following. Write the products in its simplest form.

(a) $\frac{4}{3}\times\frac{3}{8}$

$\frac{\cancel{4}^{1}}{\cancel{3}_{1}}\times\frac{\cancel{3}^{1}}{\cancel{8}_{2}}$

$=\frac{1}{2}$

(b) $3\frac{1}{6}\times\frac{1}{4}$

$3\frac{1}{6}\times\frac{1}{4}$

$=\frac{19}{6}\times\frac{1}{4}$

$=\frac{19}{24}$

(c) $2\frac{1}{3}\times 1\frac{3}{5}$

$\frac{7}{3}\times\frac{8}{5}$

$=\frac{56}{15}=3\frac{11}{15}$

(d) $\frac{2}{3}\times 3\frac{1}{5}$

$=\frac{2}{3}\times\frac{16}{5}$

$=\frac{32}{15}\Rightarrow 2\frac{2}{15}$

3. Write the reciprocals for the following fractions

(a) Reciprocal of $\frac{7}{9}$ is $\boxed{\frac{9}{7}}$

(b) Reciprocal of $\frac{1}{2}$ is $\boxed{2}$

(c) Reciprocal of $\frac{1}{2}$ is $\boxed{2}$

(d) Reciprocal of $\frac{12}{13}$ is $\frac{13}{12}$

(e) Reciprocal of $\frac{22}{33}$ is $\boxed{\frac{33}{22}}$

(f) Reciprocal of $\frac{1}{5}$ is $\boxed{15}$

4. Multiply.

(a) $\frac{1}{2}\times\frac{1}{6}\times\frac{2}{4}$

$\frac{1}{\cancel{2}_1}\times\frac{1}{6}\times\frac{\cancel{2}^1}{4}$

$=\frac{1}{24}$

(b) $\frac{1}{3}\times\frac{1}{3}\times\frac{1}{3}$

$=\frac{1}{27}$

(c) $5\frac{1}{5}\times\frac{1}{2}\times2\frac{1}{3}$

$=\frac{\cancel{26}^{13}}{5}\times\frac{1}{\cancel{2}_1}\times\frac{7}{3}$

$=\frac{91}{15}=6\frac{1}{15}$

(d) $3\frac{1}{2}\times1\frac{2}{7}\times14$

$=\frac{\cancel{7}}{\cancel{2}_1}\times\frac{9}{\cancel{7}}\times\cancel{14}^{7}$

$=63$

5. According to a recipe, a batch of cake making needs $\frac{7}{12}$ cup of milk. How much milk is needs to make 24 batches of cake?

Milk requred for 1 batch $= \frac{7}{12}$ cup

Milk required for 24 batches $= \frac{7}{\cancel{12}_1}\times\cancel{24}^{2}$

$= 14$

$\therefore$ 14 cups of milk is required.

6. Sumita baked 6 cakes. Each cake is $\frac{1}{3}$ kg. What is the total weight of the box if all 6 cakes are packed together?

Weight of 1 cake $= \frac{1}{3}$ kg

Weight of 6 cakes $= \frac{1}{\cancel{3}_1}\times\cancel{6}^{2}$

$= 2$ kg

$\therefore$ Weight of 6 cakes is 2 kg.

7. Find the sum of the reciprocal of $\frac{2}{8}$ and $\frac{6}{11}$

Reciprocal of $\frac{2}{8}$ is $\frac{8}{2}$

Reciprocal of $\frac{6}{11}$ is $\frac{11}{6}$

Sum $= \frac{8}{2}+\frac{11}{6}$

$= \frac{24+11}{6}$

$= \frac{35}{6}$

$= 5\frac{5}{6}$

8. Is $\frac{2}{5}>\frac{3}{10}$? If yes, find their product.

$\frac{2}{5}$ and $\frac{3}{10}$

$2\times10>5\times3$ true

Product $= \frac{\cancel{2}^1}{5}\times\frac{3}{10_5}$

$= \frac{3}{25}$

Exercise 7.2

1. Divide the following. Express your answer in the lowest term.

(a) $\frac{4}{13} \div \frac{5}{14}$

$= \frac{4}{13} \times \frac{14}{5}$

$= \frac{56}{65}$

(c) $\frac{7}{10} \div \frac{5}{12}$

$= \frac{7}{\cancel{10}_{5}} \times \frac{\cancel{12}^{6}}{5}$

$= \frac{42}{25} = 1\frac{17}{25}$

(c) $\frac{4}{3} \div \frac{11}{12}$

$= \frac{4}{\cancel{3}_{1}} \times \frac{\cancel{12}^{4}}{11}$

$= \frac{16}{11} = 1\frac{5}{11}$

(d) $1\frac{3}{2} \div \frac{10}{9}$

$= \frac{5}{2} \times \frac{10}{9}$

$= \frac{\cancel{5}^{1}}{2} \times \frac{9}{\cancel{10}_{2}}$

$= \frac{9}{4}$

$= 2\frac{1}{4}$

(e) $5\frac{1}{2} \div 1\frac{1}{10}$

$= \frac{11}{2} \div \frac{11}{10}$

$= \frac{\cancel{11}^{1}}{\cancel{2}_{1}} \times \frac{\cancel{10}^{5}}{\cancel{11}_{1}}$

$= 5$

(f) $\frac{1}{2} \div \frac{2}{1}$

$= \frac{1}{2} \times \frac{1}{2}$

$= \frac{1}{2} \times \frac{1}{2}$

$= \frac{1}{4}$

2. What is the quotient if you divide $\frac{12}{8}$ by $\frac{1}{4}$?

$\frac{12}{8} \div \frac{1}{4}$

$= \frac{\cancel{12}^{6}}{\cancel{8}_{\cancel{2}_{1}}} \times \cancel{4}^{1}$

$= 6$

3. Saliha is stitching lace around a square table cloth to be stitched on 4 sides. So she cuts the lace into 4 parts. What is the length of each part of the lace if the total length of the lace is 5 m?

Length of lace $= 5\,\text{m}$

Length of each part $= 5 \div 4$

$= \frac{5}{4}$

$= 1\frac{1}{4}\,\text{m}$

Exercise 7.3

1. Find the value of :

(a) $\frac{2}{7}$ of 63

$= \frac{2}{\cancel{7}} \times \cancel{63}^{9}$

$= 18$

(b) $\frac{5}{6}$ of 72

$= \frac{5}{\cancel{6}} \times \cancel{72}^{12}$

$= 60$

(c) $\frac{2}{9}$ of 126

$= \frac{2}{\cancel{9}} \times \cancel{126}^{14}$

$= 28$

(d) $\frac{1}{3}$ of $\frac{9}{2}$

$= \frac{1}{3} \times \frac{9}{2}$

$= \frac{\cancel{9}^{3}}{\cancel{6}_{2}}$

$= \frac{3}{2}$ or $1\frac{1}{2}$

(e) $\frac{1}{7}$ of $\frac{28}{17}$

$= \frac{1}{\cancel{7}} \times \frac{\cancel{28}^{4}}{17}$

$= \frac{4}{17}$

(f) $\frac{2}{6}$ of $\frac{84}{7}$

$= \frac{\cancel{2}^{1}}{\cancel{6}_{3_1}} \times \frac{\cancel{84}^{28^{4}}}{\cancel{7}_{1}}$

$= 4$

2. In a class of 42 students, $\frac{6}{7}$ of the students passed in the examination. How many students passed?

Number of students passed $= \frac{6}{7}$ of 42

$= \frac{6}{\cancel{7}} \times \cancel{42}^{6}$

$= 36$ students

3. An oil bottle has a capacity of 350 mL. If $\frac{2}{5}$ of the bottle is filled with oil. How much quantity of oil is there? How much more oil can be poured in the bottle?

Capacity of an oil bottle $= 350$ mL

Fraction of bottle filled $= \frac{2}{5}$

Quality of oil in the bottle is $= \frac{2}{\cancel{5}} \times \cancel{350}^{70}$

$= 140$ mL

Quality of oil that can be poured $= 350 - 140$

$= 210$ mL of oil.

SELF ASSESSMENT-7

Choose the correct options. (Question 1 to 5)

1. $\frac{2}{4} \times \frac{4}{2}$ is $\square$

$\frac{\cancel{2}^{1}}{\cancel{4}_{1}} \times \frac{\cancel{4}^{1}}{\cancel{2}_{1}} = \boxed{1}$

Ans : option (b)

2. **The value of $\frac{2}{4} \div \frac{2}{4}$ is _____**

$\frac{2}{4} \div \frac{2}{4}$

$= \frac{\cancel{2}^{1}}{\cancel{4}_{1}} \times \frac{\cancel{4}^{1}}{\cancel{2}_{1}}$

Ans : option (b)

3. **The Fraction $\frac{4}{7}$ when multiplied with its reciprocal gives _____**

$\frac{\cancel{4}^{1}}{\cancel{7}_{1}} \times \frac{\cancel{7}^{1}}{\cancel{4}_{1}}$

$= 1$

Ans : option (c)

4. **Find the product of $2\frac{1}{2} \times 1$.**

$2\frac{1}{2} \times 1$

$= \frac{5}{2} \times 1$

$= \frac{5}{2}$

Ans : option (b)

5. **$\frac{1}{2}$ of 18 is?**

$\frac{1}{\cancel{2}_{1}} \times \cancel{18}^{9} - 9$

Ans : option (a)

6. **Find the value: $\frac{4}{15} \div \frac{2}{5}$.**

$\frac{\cancel{4}^{2}}{\cancel{15}_{3}} \times \frac{\cancel{5}^{1}}{\cancel{2}_{1}}$

$= \frac{2}{3}$

7. **The reciprocal of $2\frac{7}{9}$ is**

Reciprocal of $2\frac{7}{9}$ or $\frac{25}{9}$ is $\frac{9}{25}$

8. **Evaluate $3\frac{1}{2} \times 18$.**

$3\frac{1}{2} \times 18$

$= \frac{7}{\cancel{2}_{1}} \times \cancel{18}^{9}$

$= 63$

9. **Find the value of $\frac{4}{9}$ of 36.**

$\frac{4}{\cancel{9}} \times \cancel{36}^{4}$

$= 16$

10. **Solve : $\frac{1}{5} \div \frac{2}{3}$.**

$\frac{1}{5} \div \frac{2}{3}$

$= \frac{1}{5} \times \frac{3}{2}$

$= \frac{3}{10}$

Chapter-8 Decimals

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Relationship between fractions and Decimals fraction. Pictorial representation of decimal fraction. Place value of decimal fractiontenths, hundredths, thousandths. Expanded form: Decimal and fraction expansion. Types of decimal fractions: equivalent, like, and unlike. Comparing decimal fractions. Ordering of decimal fraction.	Learners will be able to write decimal expanded form, comparing decimals and know the place values. Introducing through demonstration -decimal fractions as fraction with 10, 100, 1000 etc. discussing the ways in which such numbers can be written using place value system.		What is the place value of 8 is 79.285? Solve: 2.5 – 3 + (8.15 – 3.22)
Addition and subtraction of decimal fraction. Word problems on addition and subtraction of decimal fraction. Multiplication of decimal fractions by 10, 100, 1000.			
Multiplication of decimal number by whole number and decimal number by decimal number. Word problems based on addition subtraction and multiplication on decimals	Involving children in worksheet to operate on decimal ceal life scenarios can be given and story act can be done is class	Learners will be able to perform addition, subtraction and multiplication of decimals	Anita bought a per for ₹ 9.32, a colour for ₹ 50.95 and ruler for ₹5. Find the total amount spent.

Exercise 8.1

1. Compare the decimals. Use >, <, =.

(a) 0.89 $\boxed{>}$ 0.76 (b) 11.87 $\boxed{<}$ 46.87

(c) 0.4 $\boxed{=}$ 0.40 (d) 1.4576 $\boxed{<}$ 1.4596

(e) 13.5 $\boxed{<}$ 14.7 (f) 42.74 $\boxed{<}$ 42.79

2. Arrange the following decimals in ascending order.

(a) 1.45, 1.05, 1.04, 3.95

Ans. $1.04 < 1.05 < 1.45 < 3.95$

(b) 0.05, 0.005, 10.62, 10.27

Ans. $0.005 < 0.05 < 10.27 < 10.62$

(c) 2.25, 3.2, 4.9

Ans. $2.25 < 3.2 < 4.9$

3. Arrange the following decimals in descending order.

(a) 36.5, 40,75, 37.62, 110.35

Ans. 110.35, 40.75, 37.62, 36.5

(b) 19.275, 19.287, 10.15, 6.42

Ans. $19.287 > 19.275 > 10.15 > 6.42$

(c) 3.77, 4.82, 9.36

Ans. $9.36 > 4.82 > 3.77$

4. Write the decimals in expanded form.

(a) 2.456

$$(2\times1)+\left(4\times\frac{1}{10}\right)+\left(5\times\frac{1}{100}\right)+\left(6\times\frac{1}{1000}\right)$$

$$= 2+\frac{4}{10}+\frac{5}{100}+\frac{6}{1000}$$

(b) 13.24

$$= (1\times10)+(3\times1)+\left(2\times\frac{1}{10}\right)+\left(4\times\frac{1}{100}\right)$$

$$= 10+3+\frac{2}{10}+\frac{4}{100}$$

(c) 675.2

$$= (6\times100)+(7\times10)+(5\times1)+\left(2\times\frac{1}{10}\right)$$

$$= 600+70+5+\frac{2}{10}$$

(d) 172.38

$$= (1\times100)+(7\times10)+(2\times1)+\left(\frac{3}{10}\right)+\left(\frac{8}{100}\right)$$

$$= 100+70+2+\frac{3}{10}+\frac{8}{100}$$

(e) 82.075

$= (8 \times 10) + (2 \times 1) + \left(\frac{7}{100}\right) + \left(\frac{5}{1000}\right)$

$= 80 + 2 + \frac{7}{100} + \frac{5}{1000}$

(f) 13.002

$= (1 \times 10) + (3 \times 1) + \left(\frac{2}{1000}\right)$

$= 10 + 3 + \frac{2}{1000}$

5. Write the short form:

(a) $20 + 7 + \frac{8}{10} + \frac{7}{100}$ = **27.87**

(b) $100 + 40 + 9 + \frac{9}{100}$ = **149.09**

(c) $200 + 80 + 2 + \frac{7}{10} + \frac{2}{100} + \frac{1}{1000}$ = **282.721**

(d) $1 + \frac{3}{10} + \frac{4}{1000}$ = **1.304**

(e) $1000 + 100 + 10 + \frac{1}{10} + \frac{1}{1000}$ = **1110.101**

Exercise 8.2

1. Add the following.

(a) 12.65 + 18.37

	(1)	(1)	(1)	
	1	2	. 6	5
+	1	8	. 3	7
	3	1	. 0	2

Ans.

(b) 186.25 + 13.37

			(1)		
	1	8	6	. 2	5
+		1	3	. 3	7
	1	9	9	. 6	2

Ans.

(c) 112.1 + 365.9

		(1)		
	1	1	2	. 1
+	3	6	5	. 9
	4	7	8	. 0

Ans.

(d) 19.305 + 22.409

	(1)			(1)	
	1	9	. 3	0	5
	2	2	. 4	0	9
	4	1	. 7	1	4

Ans.

(e) 13.2 + 18.3 + 14.9

$$\begin{array}{r} {\scriptstyle (1)\,(1)} \\ 13.2 \\ 18.3 \\ +\,14.9 \\ \hline 46.4 \end{array}$$ **Ans.**

(f) 0.02 + 0.002 + 0.002

$$\begin{array}{r} 0.020 \\ 0.002 \\ +\,0.002 \\ \hline 0.024 \end{array}$$ **Ans.**

2. Subtract.

(a) 42.13 from 53.65

$$\begin{array}{r} 53.65 \\ -\,42.13 \\ \hline 11.52 \end{array}$$ **Ans.**

(b) 38.23 from 80.83

$$\begin{array}{r} 80.83 \\ -\,38.23 \\ \hline 42.60 \end{array}$$ **Ans.**

(c) 13.593 from 35.670

$$\begin{array}{r} 35.\cancel{6}\,\cancel{7}0 \\ -\,13.593 \\ \hline 22.077 \end{array}$$

(d) 0.007 from 0.190

$$\begin{array}{r} 0.1\,\cancel{9}0 \\ -\,0.007 \\ \hline 0.183 \end{array}$$ **Ans.**

3. On Tuesday, the temperature was 29.5°C. On Wednesday, the temperature was 34.9°C. What is the difference in temperature?

The temperature on Tuesday = 295°C.

The temperature on Wednesday = 34.9°C

∴ The difference between the temperatures =

$$\begin{array}{r} \cancel{3}4.9\ ^\circ C \\ -\,29.5\ ^\circ C \\ \hline 5.4\ ^\circ C \end{array}$$ **Ans.**

(Ans) The difference of temperature is 5.4 °C.

4. Steve runs every Saturday and Sunday. On Saturday, he ran 2.04 kilometer and on Sunday, he ran 2.65 kilometer. How many kilometer in total did Steve run this weekend?

Distance covered by Steve on Saturday = 2.04 km

Distance covered by Steve on Sunday = 2.65 km

∴ Total distance covered by Steve =

$$\begin{array}{r} 2.04\ km \\ +\,2.65\ km \\ \hline 4.69\ km \end{array}$$ **(Ans)**

(Ans) 4.69 km is the distance covered by Steve on Saturday and Sunday .

5. A building tank contained 114.75 litres of water. At the end of the day 27.36 litres of water was left in the tank. What was the quantity of water consumed?

Quantity of water at first = 114.75 l

Quantity of water at the end of the day = 27.36 l

∴ Total quantity of water consumed =

$$\begin{array}{r} {}^{(10)}\quad {}^{(6)} \\ 1\not{1}\ 4\ .\ \not{7}\ 5 \\ -\ 2\ 7\ .\ 3\ 6 \\ \hline 8\ 7\ .\ 3\ 9 \end{array} \quad \begin{array}{l} l \\ l \\ l \end{array}$$ **(Ans)**

(Ans) 4.69 km is the distance covered by Steve on Saturday and Sunday .

6. Karina went for shopping and bought clothes worth ₹ 650.75, shoes worth ₹ 950.25 and accessories for ₹ 125.80. How much money did she spend in total?

Cost of clothes = ₹650.75

Cost of shoes = ₹950.25

Cost of accessories = ₹125.80

∴ Total money spent =

$$\begin{array}{r} ₹\ 6\ 5\ 0\ .\ 7\ 5 \\ ₹\ 9\ 5\ 0\ .\ 2\ 5 \\ ₹\ 1\ 2\ 5\ .\ 8\ 0 \\ \hline ₹\ 1\ 7\ 2\ 6\ .\ 8\ 0 \end{array}$$

∴ Karina spent ₹1726.80 in total. **Ans.**

Exercise 8.3

1. Multiply the following decimal numbers by 10.

decimal shifts to the right by 1 place

(a) 2.6
2.6×10
$= 26$

(b) 36
$36 \times 10 = 360$

(c) 13.679
$13.679 \times 10 - 136.79$

(d) 147.7962
$147.7962 \times 10 = 1477.962$

2. Multiply the following decimal numbers by 100.

decimal shifts to right by 2 place

(a) 0.005
$0.005 \times 100 = 0.5$

(b) 1.32
$1.32 \times 100 = 132$

(c) 42.5
$42.5 = 4250$

(d) 63.2597
$63.2597 \times 100 = 6325.97$

3. Multiply the following decimal numbers by 1000.

decimal shifts to right by 3 place

(a) 2.3456
$2.3456 \times 1000 = 2345.6$

(b) 1.643
$1.643 \times 1000 = 1643$

(c) 18.49
$18.49 \times 1000 = 18490$

(d) 4.6543
$4.6543 \times 1000 = 4654.3$

4. Multiply the following.

(a) 1.25×4

1.25
×4
5.00

Ans: 5

(b) 13.6×43

13. 60
× 43
4. 80
54.40×
584.80

Ans: 584.80

(c) 242.3×1.2

242.3
×1.2
4846
2523×
290.76

Ans: 290.76

(d) 125×0.2

125.0
×0.2
2500
00005
25.00

Ans: 25

(e) 3.75×4.2

3.45
4.20
000
750×
1500××
15.7500

Ans: 15.75

(f) 205.3×0.003

205.300
×0.003
615900
000000×
0000000××
000000×××
000.615900

Ans: 0.6159

SELF ASSESSMENT-8

Choose the correct options. (Questions 1 to 6)

1. The place value of the digit 6 in the decimal number 8.268 is _____.

Answer : option (b)

2. $\frac{1}{1000}$ is equal to _____

Answer : option (b)

3. 0.02 when written in fraction in its simplest form is _____.

Answer : option (a)

4. Among 3.15, 3.2, 3.153 and 2.57 which is the greatest?

Answer : option (b)

5. 0.004 × 0.2 is equal to_____.

0.004
×0.2
0008
00000
00008

Ans: option (d)

6. 2.4 × 1000 is equal to _____.

Answer : option (d)

7. Add 24.65 and 37.29.

24.65
+37.29
61.94

(Ans)

8. Find the difference of 62.8 and 65.9.

65.9
−62.8
3.1

(Ans)

9. Multiply 26.45 by 8.2

26.45
×82
52.90
21160×
216890

(Ans)

Ans : 216.89

10. Is 2.35 and 2.350 like decimals? Are they equal?

Yes, they are equal.

Chapter-9 Percentage

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Introduction of percentages. Relationship between fractions, decimals and percentage. Pictorial representation of percentage. Conversion of fractions to percentages and percentages to Fractions. Conversion of decimals to percentages and percentages to decimals. Finding percentage of a number.	Learners will be able to express fraction as percentage and vice versa converting percentage to decimal and vice versa and will be able to find the percentage of a number.	Introduce percentage as fraction with denominator as 100 and relating it with decimal. Let the children know rules of conversion. Ample worksheets to be done. Ask the student to relate their marks obtained in different subject and express as percentage.	Convert : 25% into fractions 8.5% into decimal. Find : 8% of 500.

Exercise 9

1. Convert the fractions into percentage.

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

$\frac{3}{\cancel{4}} \times \cancel{100}^{25}$

$= 75\%$

(b) $1\frac{3}{5}$

$\frac{8}{\cancel{5}} \times \cancel{100}^{20}$

$= 160\%$

(c) $\frac{23}{10}$

$\frac{23}{\cancel{10}} \times \cancel{100}$

$= 230\%$

(d) $\frac{14}{20}$

$\frac{14}{\cancel{20}} \times \cancel{100}^{5}$

$= 70\%$

(e) $\frac{3}{7}$

$\frac{3}{7} \times 100$

$= \frac{300}{7}$

$= 42\frac{6}{7}\%$

(f) $\frac{1}{3}$

$\frac{1}{3} \times 100$

$= \frac{100}{3}$

$= 3\frac{1}{3}\%$

2. Express the percentage as a fraction.

(a) 150%

$= \frac{\cancel{150}^{3}}{\cancel{100}_{2}}$

$= \frac{3}{2} = 1\frac{1}{2}$

(b) 28%

$= \frac{\cancel{28}^{14^{7}}}{\cancel{100}_{\cancel{50}_{25}}}$

$= \frac{7}{25}$

(c) 55%

$= \frac{\cancel{55}^{11}}{\cancel{100}_{20}}$

$= \frac{11}{20}$

(d) 125%

$= \frac{\cancel{125}^{\cancel{5}^{1}}}{\cancel{100}_{\cancel{20}^{4}}}$

$= \frac{1}{4}$

(e) 30%

$= \frac{\cancel{30}}{\cancel{100}}$

$= \frac{3}{10}$

(f) 2%

$= \frac{\cancel{2}^{1}}{\cancel{100}_{50}}$

$= \frac{1}{50}$

3. Convert the decimal into percentage.

(a) 2.20

$= 2.20 \times 100$

$= 220\%$

(b) 2.59

$= 2.29 \times 100$

$= 259\%$

(c) 0.132

$= 0.132 \times 100$

$= 13.2\%$

(d) 0.45

$= 045 \times 100$

$= 45\%$

(e) 0.07

$= 0.07 \times 100$

$= 7\%$

(f) 0.007

$= 0.007 \times 100$

$= 0.7\%$

4. Express the following percentage as decimal.

(a) $82\% = \frac{82}{100} = 0.82$

(b) $118\% = \frac{118}{100} = 1.18$

(c) $19\% = \frac{19}{100} = 0.19$

(d) $81\% = \frac{81}{100} = 0.81$

(e) $40\% = \frac{4\cancel{0}}{10\cancel{0}} = 0.4$

(f) $2\% = \frac{2}{100} = 0.02$

5. Find the value of

(a) 20% of ₹100

$\frac{20}{100} \times 100$

= ₹ 20

(b) 16% of 250 gm

$= \frac{^{8}\cancel{16}}{_{2}\cancel{10}\cancel{0}} \times 2\cancel{5}^{5}\cancel{0}$

= 40g

(c) 25% of 200

$= \frac{25}{1\cancel{0}\cancel{0}} \times 2\cancel{0}\cancel{0}$

= 50

(d) 15% of 300

$= \frac{15}{1\cancel{0}\cancel{0}} \times 3\cancel{0}\cancel{0}$

= 45

6. 88% of the children in a class like mango and the rest likes bananas. What percent of children like bananas?

Percentage of children who like mango = 88%

Percentage of children who like banana = 100 – 88

= 12%

7. Out of 50 students in a class, 22 students scored grade 'A' in art and craft. What percent of students scored grade 'A'? How many students did not get grade 'A'?

Number of students who scored grade A = 22 out of 50

Percentage of students who scored grade A $= \frac{22}{50_{1}} \times \cancel{100}^{2}$

= 44%

Number of students who did not get grade A = 50 – 22 = 25 students.

8. In a fruit basket, 30% of fruits are apples, 25% are mangoes and rest are bananas. What percent of fruits are bananas? If there are 100 fruits, how many mangoes are there?

Percentage of apples = 30%

Percentage of mangoes = 25%

Percentage of bananas = $100-(30+25)$

$= 100-55$

$= 45\%$

There are 45% of bananas

Number of mangoes = $\frac{25}{100}\times 100$

= 25 mangoes.

9. Which is more : 30% of 150 or 13% of 200?

Which is greater?

30% of 150 or 13% of 200

$= \frac{3\cancel{0}}{1\cancel{0}\,\cancel{0}}\times 15\cancel{0}$ or $\frac{13}{100}\times 200$

$= 45$ $= 26$

Since $45 > 26$

$\therefore$ 30% of 150 is greater

10. Which is greater? 20% or 0.002.

Which is greater?

20% or 0.002

$= \frac{20}{100}$

$= 0.20$ or 0.002

$\therefore$ 0.20 is greaer i.e 20% is greater

SELF ASSESSMENT-9

Choose the correct options. (Questions 1 to 5)

1. 0.003 as a percent is?

0.003 as percent

$= 0.003 \times 100$

$= 0.3\,\%$

Ans : option (a)

2. 30% of a pole is painted red and rest is painted blue. What percent of the pole is painted blue?

Ans : option (c)

3. $\frac{11}{20}$ **expressed as percentage is**

Since 30% is pauted red $100-30=70\%$ is pa int ed blue.

Ans: option (c)

4. 25% of 200 is?

25% of 200

$= \frac{25}{100}\times 200$

$= 50$

5. 50% expressed as decimal is

50% as decimal

$= \frac{50}{100} = 0.50 = 0.5$

Ans: option (a)

6. The strength of a class is 50 on a rainy day, If 50% of the students were present. How many students were present?

Students present = 50% of 50

$= \frac{{}^{25}\cancel{50}}{{}_{2}\cancel{100}}\times \cancel{5}\cancel{0}$

= 25 students

7. Express 85% in decimal.

85% as decimal

$= \frac{85}{100} = 0.85$

8. Find the value of 80% of 1500.

$\frac{80}{100}\times 1500$

$= 1200$

9. Use > or < or =

(a) $12\% \square 0.12\%$

$= \frac{12}{100} \square \frac{0.12\%}{100}$

$= 0.12 \boxed{>} 0.0012$

(b) $30\% \square 0.3$

$= \frac{30}{100} \square 0.3$

$= 0.3 \boxed{>} 0.3$

Chapter-10 Integers

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Introduction to negative numbers (using number line). Comparison of integers through number line.	Learners will be able to compare, order and perform addition and subtraction of integers.	Involve children in discussion to have necessity of numbers less than zero like temperature below zero degrees, or above and below sea level.	Write the following as integers. (a) A deposit of ₹500 (b) Decrease in temperature by 2.

Ascending and descending order of integers. Rules for addition and subtraction of integers. Application of integers.		Worksheet to be done with the children involving using number line to represent negative numbers. Involve the students and give them real life examples of use of integers.	Plot the following integers on the number line 5, – 2, 7, –3, – 4

Exercise 10.2

1. Compare and use >, < or =.

(a) 2 $\boxed{<}$ 5 (b) –4 $\boxed{=}$ –4

(c) –5 $\boxed{>}$ –8 (d) –80 $\boxed{<}$ 80

(e) –30 $\boxed{>}$ –42 (f) –36 $\boxed{>}$ –42

(g) 36 $\boxed{>}$ –36 (h) –36 $\boxed{<}$ 92

2. Pick out the integers from each of the following set of numbers.

(a) –24, 18, and 37 (b) –14, 0, 3 (c) 0

3. Arrange the following in ascending order.

(a) –25, 15, 25, –40 = –40, –25, 15, 25

(b) 14, 12, 0, –12, 18, –14 = –14, –12, 0, 12, 14, 18

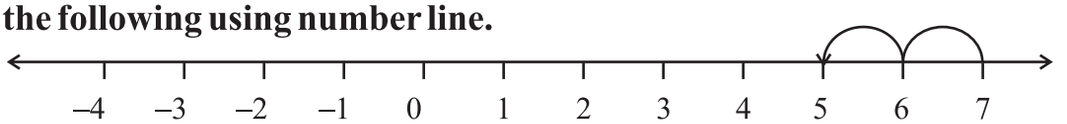
4. Arrange the following in descending order.

(a) 12, 14, 0, –18, –11, 11 = 14, 12, 11, 10, –11, –18

(b) 0, 5, 8, –14, 13, –10 = 13, 8, 5, 0, –10, –14

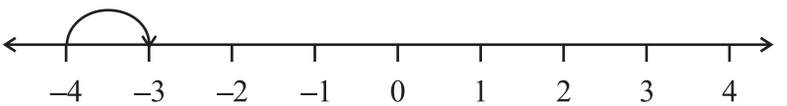
5. Add the following using number line.

(a)



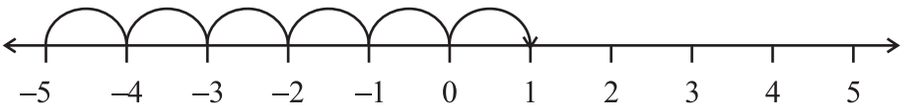
$7 + (-2) = \mathbf{5}$

(b)



$-4 + 1 = \mathbf{-3}$

(c)



$-5 + (6) = \mathbf{1}$

(d) $8+8$

Similarly using number line for others.

$8+8=16$

(e) $12+(-12)$

$=0$

(f) $-5+(+5)$

$-5+5=0$

6. Subtract the following using number line.

(a) $10-(-24)$

$10-(-24)$

$= 34$

(b) $-9-5$

$=-14$

(c) $+2-2$

$=0$

(d) $-20-5$

$=-25$

(e) $-2-4$

$=-6$

(f) $-1-1$

$=0$

Exercise 10.2

1. Write the following as integers (positive or negative).

(a) +₹150 (b) −₹250 (c) −₹250

(d) $-2+25$ (e) $-2\,°C$

2. Find the integers for the following.

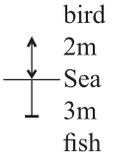
(a) -71 (b) 42 (c) $-7+4=-3$

(d) 34 (e) $-5-2=-7$

3. A bird is flying 2 m above ground and a fish is swimming in a lake 3 m below. Write in integer the distance between the fish and the bird.

Distance between bird and fish = 2 + 3

= 5m



4. Aashi had ₹ 300 in his bank account. He withdrew ₹200 from the bank. Express this in integer.

+ ₹300 − ₹200 = ₹100

5. Express as integer : 25 m below sea level.

–25 m

Exercise 10.3

1. Write the absolute value for the following integers.

(a) Absolute value of $|2|$ is 2

(b) Absolute value of $|+9|$ is 9

(c) Absolute value of $|-7|$ is 7

(d) Absolute value of $|-18|$ is 18

(e) Absolute value of $|8|$ is 8

(f) Absolute value of $|-4|$ is 4

2. Add the following.

(a) –7 and 5
$-7+5$
$= -2$

(b) 2 and 10
$2+10$
$= 12$

(c) –7 and 7
$-7+7$
$= 0$

(d) –7 and –7
$-7+(-7)$
$= -7-7$
$= -14$

(e) –5 and 14
$-5+14$
$= 9$

(f) –12 and 12
$-12+12$
$= 0$

3. Subtract :

(a) 2 from 14
$14-2$
$= 12$

(b) 2 from –14
$-14-2$
$= -16$

(c) 3 from –17
$-7-3$
$= -20$

(d) 2 from –18
$-18-2$
$= -20$

4. Solve :

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

(b) $32+50-30$
$= 82-30$
$= 52$

(c) $-2-3+3$
$= -5+3$
$= -2$

(d) $150-250$
$= -100$

SELF ASSESSMENT-10

Choose the correct options. (Question 1 to 5)

1. Descent of 12 m.
Ans : option (c)

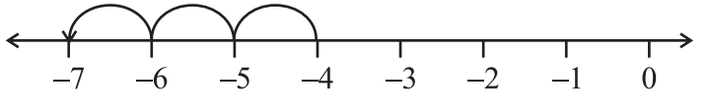
2. Winning of 30 points.
Ans : option (a)

3. Which is given in descending order?
Ans : option (b)

4. Opposite of –250.
Ans : option (a)

5. –2 – 3 = ?
Ans : option (b)

6. Subtract using number line : –4 –3.

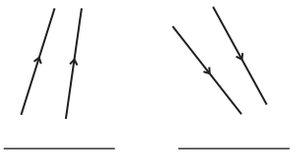
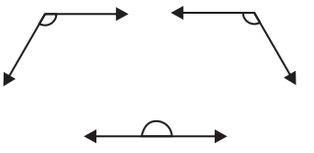
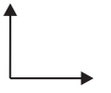


–4–3= –7

7. Express as an integer expression: A man deposited `3000 and withdrew ₹1500 next day.
₹3000 – 11500 = ₹1500

8. In a city, the temperature is –2°C. If the temperature increased by 3°C. What is the temperature now?
–2°C + 3 ° C = – 1°e

Chapter-11 Lines and Circles

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Concept of point, ray, line, line segment Drawing a line segment Concurrent, collenear, non-collernear, Intersecting, parellel and perpedicutar lines	Learners will able to identify point, ray, line etc. and draw a line segment of given length They will alse be able to differentiate between parellel and perpendicuton line	Prepare a powerpoint presention showing point, ray, line, line segment etc	Identify who their parallel or perpudicular 
Angles and its measures. Classification of eagles into right, acute, obtuse, straight and reflex angle	Learners will be able to identify and classify angles	Using paper folding (fold art angle) right angles can be identified . Identifying angles formed by object in the classroom	Identify the types of angle 
Measuring angles using protractor	Learners will be able measure angles using protractor	Warksheets to measure angles and can name be done	Measure and state the type of angle 

Exercise 11.1

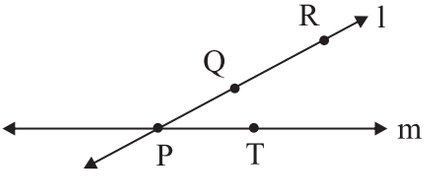
1. How many lines can be drawn through a given point?

Infinite/many lines can be drawn through a given point

2. Draw a line segment of length 4.9 cm.

 The length should be 4.9 cm

3. Use the adjoining figure to answer the following questions.

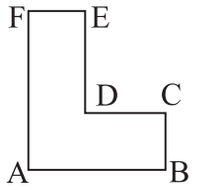


(a) m **(b)** p **(c)** yes **(d)** co-linear **(e)** No

4. Classify the following lines as intersecting, parallel or perpendicular.

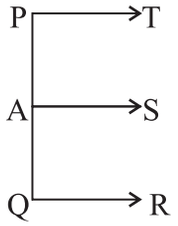
(a) intersecting (b) perpendicular (c) perpendicular
(d) parallel (e) intersecting

5. Count and name the line segment in the adjoining figure.



line segments : AB, BC, CD, DE, EF, FA
6 lines

6. Name the ray and line segment in the adjoining figure.

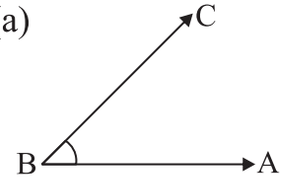


3 line segment (PQ, AP, AQ)
3 rays $\overrightarrow{PT}$, $\overrightarrow{AS}$, $\overrightarrow{QR}$

Exercise 11.2

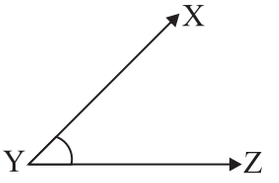
1. Name the angle marked.

(a)



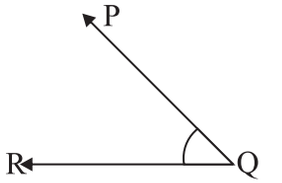
∠CBA or ∠ABC

(b)



∠XYZ or ∠ZYX

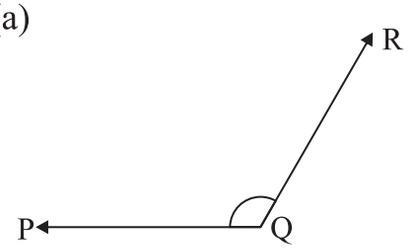
(c)



∠PQR or ∠RQP

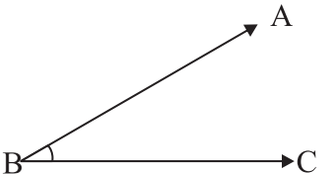
2. Classify each angle as right, acute, obtuse or straight.

(a)



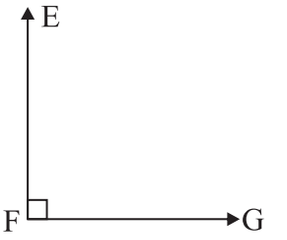
obtuse angle

(b)



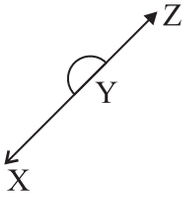
acute angle

(c)



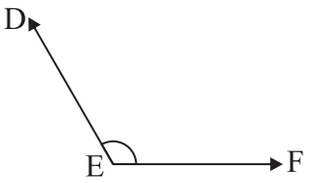
right angle

(d)



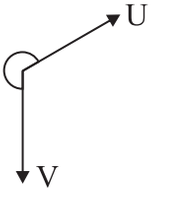
straight angle

(e)



obtuse angle

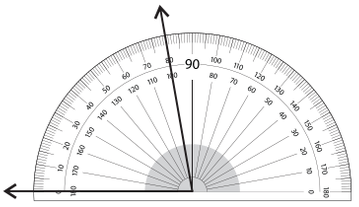
(f)



reflex angle

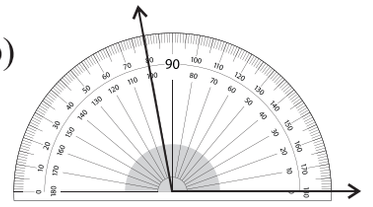
3. Write down the value of the angles.

(a)



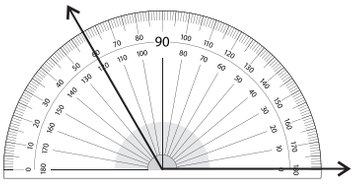
80°

(b)



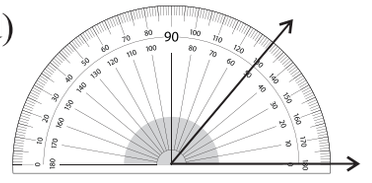
100°

(c)



120°

(d)



50°

4. Do it yourself.

5. Identify the pair of angles as complementary, supplementary or none. C for complementary , S for supplementary and N for non.

(a) 32, 86

$\because$ $32 + 86 = 118°$ (which is not equal to 90° or 180°)

Therefore, 32°, 86° is neither complementary not supplementary

Answer : N

(b) 48°, 132°

$\because$ $48 + 132 = 180°$ (supplementary angle)

Answer : S

(c) 36° and 54°

$\because$ $36 + 54 = 90°$ (complementary angles)

Answer : C

(d) 108°, 72°

$\because$ $108 + 72 = 180°$ (supplementary angles)

Answer : S

6. What is the complement of 37°?

Complement of 37° = $90 - 37$

= $53°$

Answer : 53°

7. What is the supplement of 49°?

Supplement of 49° = $180 - 49$

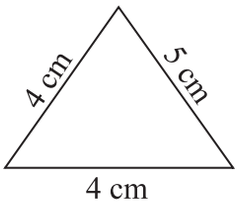
= $131°$

Answer : 131°

Exercise 11.3

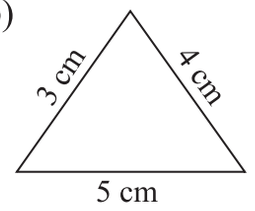
1. Classify the following triangles on the basis of sides.

(a)



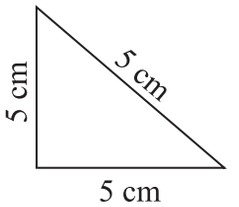
Isosceles

(b)



Scalene

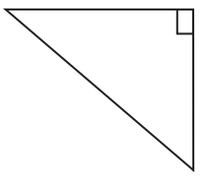
(c)



Equilalesal

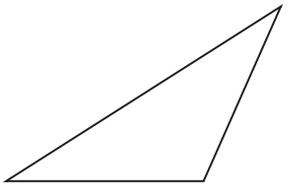
2. Classify the following triangles on the basis of angles.

(a)



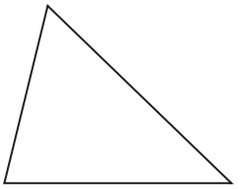
Right angled triangle

(b)



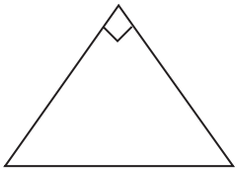
Obtuse angled triangle

(c)



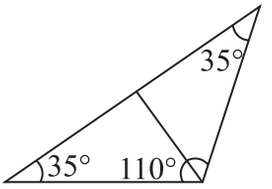
Acute angled trinagle

(d)



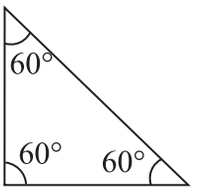
Right angled triangle

(e)



Obtuse angled triangle

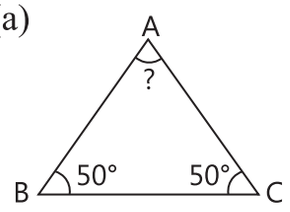
(f)



Acute angled trinagle

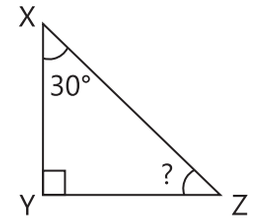
3. Find the value of the unknown angles of the triangles.

(a)



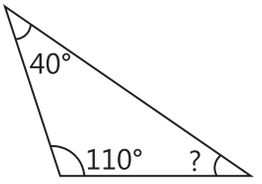
$\angle A = 180 - (50 + 50)$
$= 180 - 100$
$= 80°$

(b)



$\angle Z = 180 - (90 + 30)$
$= 180 - 120$
$= 60°$

(c)



$\angle R = 180 - (110 + 40)$
$= 180 - 150$
$= 30°$

Exercise 11.4

1. Name the parts of the circle.

(a) radius = AB or AF or AE
(b) diameter = EF
(c) chord = XY
(d) cent = A

2. Do it yourself.

3. If a circle has a radius of 5cm, what is the length of its diameter?

radius = 5cm

$\therefore$ diameter = $2 \times$ radius

= $2 \times 5 = 10$cm

4. If the diameter of a circle is 6cm, is the radius 120cm? Give reasons for your answer.

diameter = 6 cm

radius = radius $\div 2$

= $6 \div 2$

= 3 cm

No, diameter is not 12 cm since radius is half of diameter.

SELF ASSESSMENT-11

Choose the correct options. (Questions 1 to 5)

1. AB is a

Ans : option (b)

2. $\angle$PQR is approximately:

Ans : option (c)

3. How many right angle make up a straight line?

2 right angles make up a straight line (180°)

Ans : option (b)

4. Which of the following is correct for an obtuse angle?

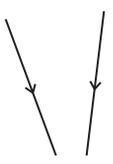
Ans : option (b)

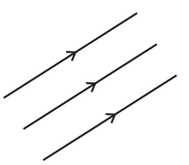
5. If an angle is marked as  **it is a**

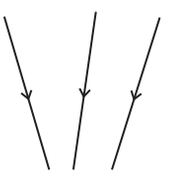
Ans : option (b)

6. Classify the following as Parallel and Intersecting lines.

(a) (b) (c)







intersecting lines **parallel lines** **intersecting lines**

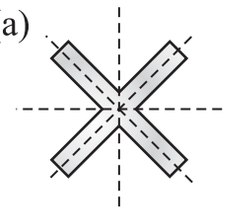
7. Do it yourself.

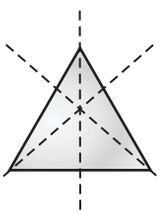
Chapter-12 Symmetry and Reflection

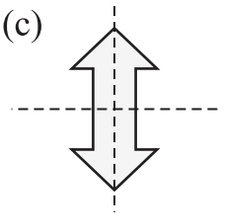
Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Symmetry is shapes and figures.	Learners will be able to identify symbolical figures and identify reflection and rotational symmetry	Ask the students to discover symmetry in the surrounding objects/ environment.	Draw a figure which haw symmetry (both rotational and reftion symmetry
Reflection and rotational symmetry is 2-D shapes.	Learners will be able to identify nets of different 3-D figures.	Worksheets including rotational and reflection symmetry	
Nets of cubes, cuboids, cylinders and cones		Using paper cake the students cut and nets of different figures	Draw the net of a cuboid

Exercise 12.1

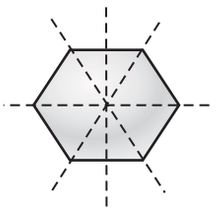
1. Circle the prime numbers from the given numbers.

(a) 

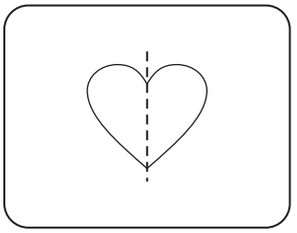
(b) 

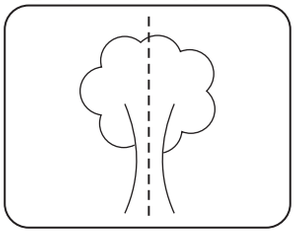
(c) 

(d) 

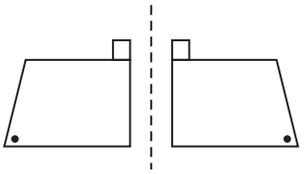
(e) 

2. Draw any two shapes having symmetry.





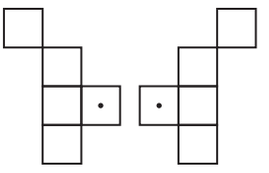
3. Say whether the shape has been rotated or reflected.

(a) 

reflected

(b) 

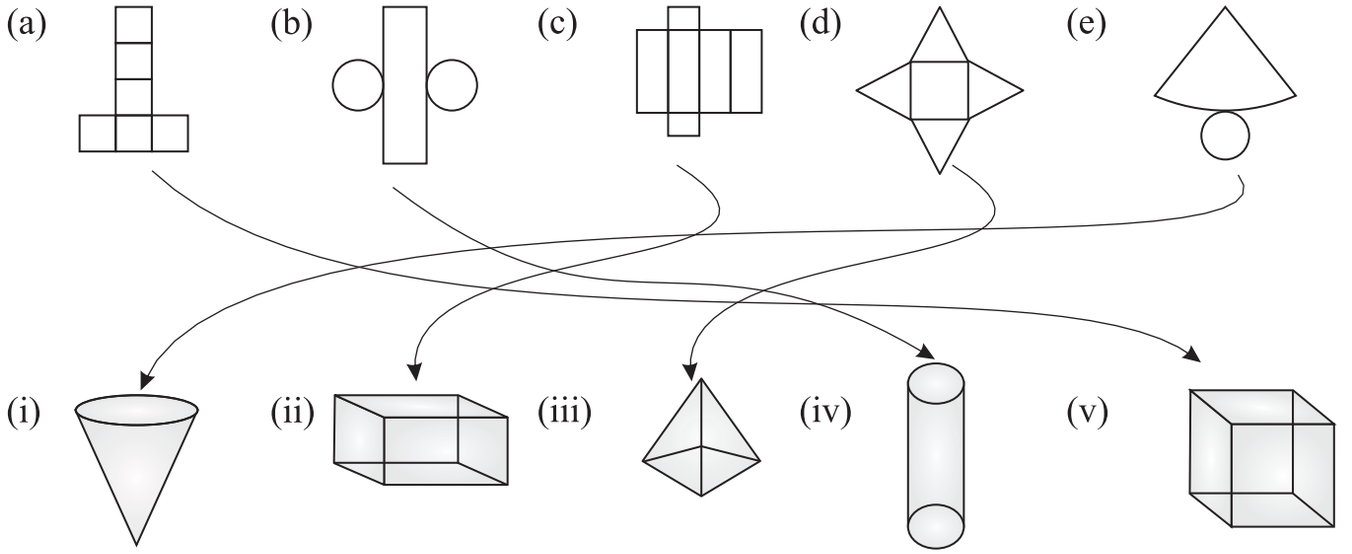
rotated

(c) 

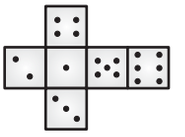
reflected

Exercise 12.2

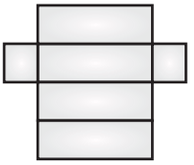
1. Match the nets to the respective solids.



2. Which of the dice below could be made from this net?



3. Which of the following nets would form a rectangular prism?

(d)  will form a rectangular prism

SELF ASSESSMENT-12

Choose the correct options. (Questions 1 to 5)

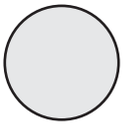
1. Which of these is the net of a cube?

(d) All of these

2. The adjoining figure has _____ lines of symmetry.

(d) 4

3. Which of these have rotational symmetry?

(a) 

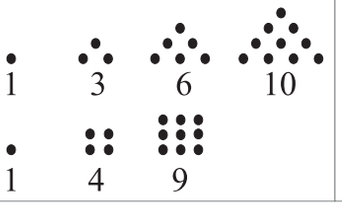
4. After how many quarter turn will these look the same as the original?

(d) 4 

5. A rectangle has _____ lines of symmetry.

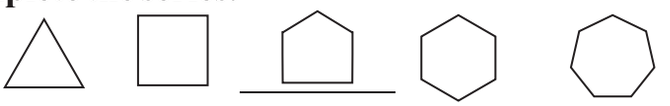
(b) 2

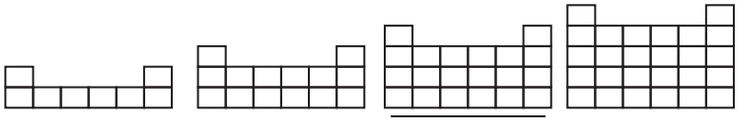
Chapter-13 Patterns

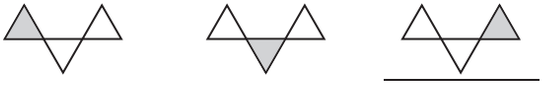
Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Patterns with shapes and numbers Progressive patterns Patterns with more than one characteristics Triangular and square numbers	Students will be able to identify the rule of pattern and progressive pattern and find out the next in the pattern or series Students will be able to find out series of numbers that form a triangular of square shape.	Providing a lot of patterns to the children and have a unit of repeat Let the children identify and extend the pattern. Give exposure to progressive patterns for eg. 2, 4, 6, ..., 5, 10, 15... or Providing opportunities of identifying numbers that can be placed as triangle and square.  1 3 6 10 1 4 9	State next in the patterns 1) ○ , ⁂ , ⁂, ____ 2) 1, 4, 9, ___ , ___ Draw the next in the patterns ○ ⁂ ⁂ ___, ___

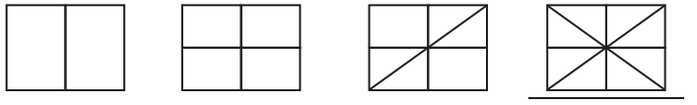
Exercise 13.1

1. Complete the series.

(a) 

(b) 

(c) 

(d) 

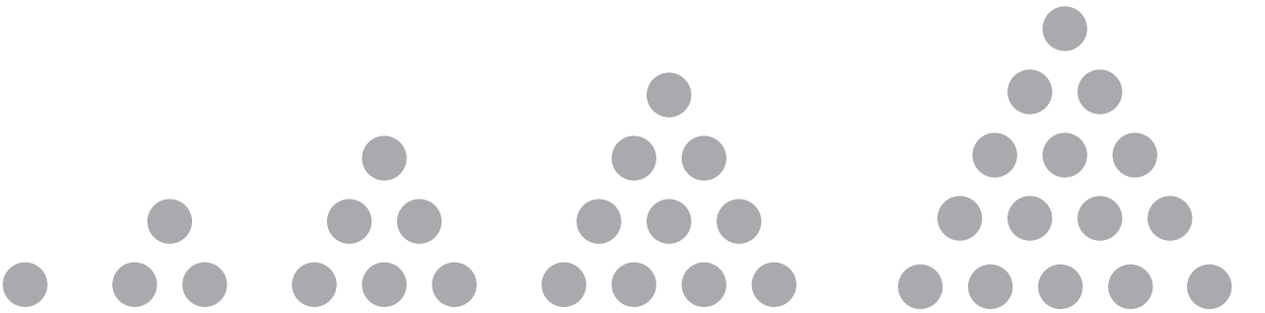
2. Write the next two number in the given patterns.

(a) 71, 60, 49, 38, **27, 16**

(b) 300000, 30000, 3000, 300, **30**

(c) 65, 62, 59, 56, 53, **50, 47**

3. Draw the dots to show the next shape.



SELF ASSESSMENT-12

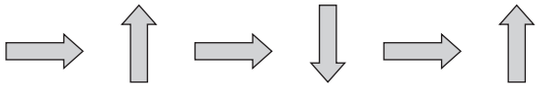
Choose the correct options. (Questions 1 and 2)

1. Which of the following option will complete the pattern?

5, **10**, 15, **20**, 25

Ans : option (b) 10, 20

2. What will come next?



Ans : option (c)

3. Write the next 2 numbers for the following patterns.

(a) 1, 7, 14, 21, **28** , **35** (multiple of 7)

(b) 20, 40, 80, 160, **320** , **640** (multiply by 2)

4. Write the first 10 triangular numbers.

1, 3, 6, 10, 15, 21, 28, 36, 45, 55

5. Is 16 a square number? If yes, draw the dot to show formation of square.

○ ○ ○ ○

○ ○ ○ ○

○ ○ ○ ○

○ ○ ○ ○

6. Extend the pattern by filling in the blanks.

(a) PQR, PRS, PST, **PTU** , **PUV**

(b) 2122, 2222, 2322, 2422, **2522** , **2622**

(c) 6, 7, 8, 9, 6, 7, **8** , **9**

Chapter-14 Measurment

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Concept of Length, mass and capacity. Different units and conversion of higher unit to lower unit and vice-versa	Learners will be able to convert length, mess, capacity from one unit to another	Provide the children with pratic questions for interconversion of units in interesting ways. For eg. Take two 1 litre cold drink bottle. As the students to say the capacity.	Anita bought bottles of juice of capacity 5 litre Exprese the quantity of juice in mL.
Addition and subtraction of units of length, mass and capacity.	Learners will be able to perform basic operations like addition and subtraction of units of length, mass and capacity.	Perform group activity. Give the children real life situations involving involving addition and subtraction of length, mass and capacity. For eg : Ask the students to measure the length of 2 small pencils when put together. Cross check by adding up the individual length of each pencil.	Amit bought 2 pieces of cloth measuring 2m 8cm and 1m 750 cm. What is the total length of cloth purchased.

Exercise 14.2

1. Write the appropriate units of measurement that you will use to measure the following object.

(a) Weight of a school bag. **kg**
(b) Length of a bedsheet. **m**
(c) Mass of a pair of shoes. **g**
(d) Capacity of a bucket. **c**
(e) Length of pencil. **cm**
(f) Mass of a handful of sugar. **mg**

2. Convert.

(a) 330 mm into cm
= $330 \div 10$
= 33 cm.

(b) 86 hL into L
= $86\text{hL} \times 100$
= 8600L

(c) 200 dL into mL
= 200×100
= 20000 mL.

(d) 460 daL into kL
= $460 \div 100$
= 4.6 kL

(e) 45 kg into dg

= 45 × 10000

= 450000 dg.

(f) 4 m 20 cm into cm

4m = 400 cm

= (400 ÷ 20) cm

= 420 cm.

(g) 3000 g into kg

= 3000 ÷ 1000

= 3 kg.

(h) 12 kg 40 g into g

12kg = 12000g

= (12000 ÷ 40) g

= 12040g.

(i) 25 daL into mL

= 25 × 10000

= 250000 mL.

(j) 250 cg to kg

= 250 ÷ 100000

= 0.0025 kg.

3. Express 400 mm in cm.

400 mm to cm

400 ÷ 10

= 40 cm.

4. The height of a pole is 4.7m. How much is the length in km?

4.7m to km

4.7 ÷ 1000

0.0047 km

5. Convert 43 kL in mL.

43 kL to mL

43 × 1000000

43000000 mL

6. Express 50 mL in cL.

50 mL to cL

50 ÷ 10

= 5 cL

7. Fill in the blanks.

(a) 0.3 km = **300** m.

1 km = 1000 m

0.3 km = (0.3 × 1000) m

= 300 m

(b) 120 mm = **12** cm.

$1\text{mm} = \frac{1}{10}\text{cm}$

$120\text{mm} = \frac{1}{1\cancel{0}} \times 12\cancel{0}$

= 12 cm.

(c) 1000 m = **1** km.

1000 m to km

= 1 km

(d) 1 kg = **1000** g.

1 kg to g

1 kg = 1000 g

(e) 1 L = **1000** mL.

1 L = mL

1 L = 1000 mL

Exercise 14.2

1. Add the following.

(a) 72m 50 cm + 15 m 75 cm

m	cm
72	50
+ 15	75
88	25

Ans : 88 m 25 cm.

(b) 75 kg 312g + 34 kg 215 g

m	cm
75	312
+ 34	215
109	527

Ans : 109 kg 527g.

(c) 7 m 9 cm + 12 m 8 cm

m	dm
7	9
+12	8
20	7

Ans : 20m 7dm.

(d) 2.65 L + 18.95 L

2	.	65L
+ 18	.	95L
21	.	60L

Ans : 21.60L.

(e) 4.70 m + 0.25 m

4	.	7m
+ 0	.	25m
4	.	95m

Ans : 20m 7dm.

2. Subtract the given measures.

(a) 21.75 m from 25.25 m

④		
25	.	25m
– 21	.	75m
3	.	50m

Ans : 3.50m.

(b) 20 hL 36L from 36 hL 12 L

hL	L
⑤	
36	12
– 20	36
15	76

Ans : 15 hL 76L

(c) 88.47 g from 100.25g

⑨⑨	–	①①
100	.	25g
– 88	.	74g
11	.	75g

Ans : 11.78g.

(d) 225 mL from 260 m L

mL
⑤①
260
– 225
35

Ans : 35mL.

(e) 145 kg 200 g from 500 kg 800 g.

	⑨ ①	
	5 0 0	8 0 0
−	1 4 5	2 0 0
	3 5 5	6 0 0

Ans : 355 kg 600g.

3. A bakery baked 58 kg of cake in the morning. By the end of the day 43 kg 850 g of cake was sold. How much cake is left in the bakery?

Quantity of cake baked in the morning

Quantity of cake sold

∴ Quantity of cake left

	⑦	⑨ ①	
	5 8 kg	0 0 0 g	
−	4 3 kg	8 5 0 g	
	1 4 kg	1 5 0 g	

Ans : 14kg 150g.

4. Rohit travelled 32.5 km in a day. While returning, he travelled 30.25 km. How much distance did Rohit travel in total?

Distance travelled by Rohit in a day

Distance travelled by Rohit while returning

3 2 . 5	k m
+ 3 0 . 2 5	k m
6 2 . 7 5	k m

Ans : 62.75km.

Exercise 14.3

1. Multiply the given metric measures.

(a) 5 kg 279 g by 3

5kg	279g	
×	3g	
15kg	837g	

Ans : 15kg 837g

(b) 4 L 009mL by 12

4L	009mL	
×	12mL	
48L	108mL	

Ans : 48kg 108mL

(c) 46 km 32 m by 22

km	m	
4 6	3 2	
×	2 2	
9 2	6 4	
9 2 6	4 ×	
1 0 1 9	0 4	

Ans : 101 km 904m

(d) 3 cm by 13

= 3 × 13

= 39 cm

(e) 6 kg 125 g by 12

6kg 125 g = 6125g

6	1	2	5
×		1	2
7	3	5	0 0

Ans : 73kg 500g

2. Divide the given metric measures.

(a) 6975 km by 3

$$\begin{array}{r} 2325 \\ 3\overline{)6975} \\ -6\downarrow \\ \hline 09 \\ -9\downarrow \\ \hline 07 \\ -6\downarrow \\ \hline 15 \\ -15 \\ \hline 0 \end{array}$$

2325 km

(b) 4254mL by 2

$$\begin{array}{r} 2127 \\ 2\overline{)4254} \\ -4\downarrow \\ \hline 02 \\ -2\downarrow \\ \hline 05 \\ -4\downarrow \\ \hline 14 \\ -4 \\ \hline 0 \end{array}$$

2127 mL

(c) 51325mL by 5

$$\begin{array}{r} 10265 \\ 5\overline{)51325} \\ -5\downarrow\downarrow \\ \hline 013 \\ -10\downarrow \\ \hline 32 \\ -30\downarrow \\ \hline 25 \\ -25 \\ \hline 0 \end{array}$$

10265 km

(d) 3400 m by 20

$$\begin{array}{r} 170 \\ 5\overline{)3400} \\ -20\downarrow \\ \hline 140 \\ -140\downarrow \\ \hline 00 \end{array}$$

170 km

(e) 315 km by 5

$$\begin{array}{r} 63 \\ 5\overline{)315} \\ -30\downarrow \\ \hline 15 \\ -15 \\ \hline 0 \end{array}$$

63 km

3. Sunita travelled 7 days. If she travelled 82 km 560m each day, what is the total distance travelled by her in all?

In 1 day sunita travels = 82 km 560 m

= 82560 m

In 7 days she will travel =

		8	2	5	6 0
×					7
	5	7	7	9	2 0

Ans : 577 km 920m.

4. The weight of 7 bags of wheat is 17.5 kg. If the weight of all bags are equal, find the weight of one bag.

Weight of 7 bags of wheat = 17.5 kg

Weight of 1 bag = $\left(\frac{17.5}{7}\right)$ kg

2.5kg **Ans.**

5. If one bucket can hold 3L 325mL of water, what quantity of water will 15 such buckets hold. Give the answer in mL.

One bucket of water holds 3L 325mL

= 3325 mL

15 buckets can hold

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

49875 mL

Ans : 49L 875mL

6. A basket full of fruits weighs 6 kg 125 g. What will the weight of 15 such baskets?

1 basket of fruits weighs = 6kg 125g

= 6125g

15 baskets will weigh =

			①	②	
		6	1	2	5
×				1	5
3	0	6	2	5	
6	1	2	5	0	
9	1	8	7	5	

Ans : 91kg 875g

SELF ASSESSMENT-14

Choose the correct options. (Questions 1 to 5)

1. **Which of these is greater than hectogram?**
   Ans : option (a) kilogram is greater than hectogram
2. **The distance between your school and house is about _____.**
   Ans : option (b)
3. **500 ml + 500 ml is _____.**
   500 mL + 500 ml = 1000 mL or 1L
   Ans : option (d)
4. **1 hectometre = _____ metres**
   Ans : option (b)
5. **45 km = _____ m.**
   45 kg = 45 × 1000 = 45000 m.
   Ans : option (b)
6. **Convert the following.**
   (a) 6 m 25 cm = **625** cm
   (b) 2657 m = **2** km **657** m
   (c) 10 L 990 mL = _____ mL
7. **Add : 10 cm 8 mm + 11 cm 5 mm.**

	10 cm	8 mm
×	11 cm	5 mm
	22 cm	3 mm

8. **Subtract : 9 km 70 m from 200 km.**

	200 km	000 m
×	9 km	070 m
	190 km	930 m

   Ans : 190 km 930m

9. **Multiply : 250 m × 12.**
   250 m × 12
   = 3000 m or 3 km
10. **Divide : 250 m ÷ 5**
    250 m ÷ 5
    = 50 m

Chapter-15 Perimeter, Area and Volume

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Area and perimeter of simple geometrical shapes and closed figures	Learners will be able to calculate area and perimeter of a closed figures with given measures	Conduct exploration activities with groups of children to prove that figures having same area may have different perimeters.	Calculate the area and perimeter of a gives figure

Concept of Volume : Volume of cube and cuboid	Learners will be able to calculate the volume of cube and cuboid	Take a 3 cubes length 1cm. Place it on top of one another to make it a cuboid and calculate its volume	Is area and perimeter same? Calculate the volume of a cuboidal tanks of dimensions 5 × 4 × 2cm.

Exercise 15.1

1. Find the perimeter of the squares with sides give below.

(a) 10 cm
10×4
$= 40$ cm

(b) 27 cm
27×4
$= 108$ cm

(c) 15.0 cm
15.2×4
$= 60.8$ cm

(d) 174 mm
174×4
$= 696$ mm

2. Find the perimeter of the rectangle with the sides given below.

(a) length = 22cm
breadth = 30cm
L = 22 cm
B = 30 cm
P = 2 (L + B)
= 2 (22 + 30)
= 2 × 52 = 104 cm

(b) Length = 12mm
Breadth = 7 mm
L = 12 mm
B = 7 mm
P = 2 (L + B)
P = 2 (12 + 7)
P = 2 (19)
p = 38 mm

(c) Length = 13m
Breadth = 11m
L = 13 m
B = 11m
P = 2 (L + B)
= 2 × (13 + 11)
= 48 m

3. Find the perimeter of the triangle with sides given below.

(a) 34cm, 18cm and 22cm
p = sum of all three sides
= 34 + 18 + 22
= 74 cm

(b) 7cm, 8cm and 9cm
p = sum of all three sides
= 7 + 8 + 9
= 24 cm

(c) 1.2 mm, 4 mm and 4 mm
p = sum of all three sides
= 1.2 + 4 + 4
= 9.2 mm

4. Find the perimeter of a rectangular garden with length 14cm and breadth 13cm.

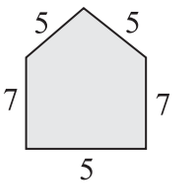
L = 14 cm
B = 13 cm
P = 2 5 (L + B)
P = 2 × (14 + 13)
P = 2 × 27
P = 54 cm

5. Find the perimeter of a square of side 12cm.

Side = 12 cm
P = 12 × 4
= 48 cm

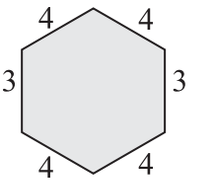
6. Calculate the perimeter of the given figures. All measures are in cm.

(a)



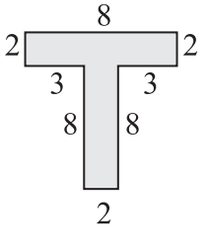
5 + 5 + 7 + 7 + 5 = 29cm

(b)



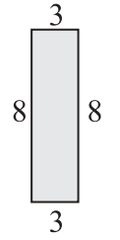
4 + 4 + 3 + 3 + 4 + 4 = 22 cm

(c)



2 + 8 + 2 + 3 + 3 + 2 + 8 + 3 + 2 = 36 cm

(d)



3 + 8 + 8 + 3 = 22 cm

Exercise 15.2

1. Find the area of the squares with the given sides.

(a) 22m
side = 22 × 22
= 484 sq.m

(b) 300cm
side = 300 × 300
= 90000 sq.m

(c) 1.2km
10.2 km = 1.2 × 1.2
= 1.44 sq. 1cm

(d) 14 mm
14 mm = 14 × 14
= 196 mm

2. Find the area of the rectangles with the given sides.

(c) Length= 4 km, Breadth = 2 km.
L = 4 km B = 2km
Area = L × B
= 4 × 2
= 8 sq.m

(b) Length=15.5cm, Breadth = 10cm
L = 15.5 km B = 10 cm
A = 15.5 × 10
= 155 sq.cm

(a) Length = 20m, Breadth = 18m

L = 20 m B = 18 m

Area = L × B

= 20 × 18

= 360 sq.m

3. A flower bed is in the shape of a rectangle with length 18m and breadth 13m. Find the area covered with flowers.

Length of flower bed = 18m

breadth of flower bed = 13m

Area of flower bed = 18 × 13

= 234 sq.m

4. A square cardboard of side 23m needs to be painted. Find the area to be painted.

Area to be painted = side × side

= 23 × 23

= 526 sq.m

5. Find the area of a rectangle with length 14 cm and breadth 13cm.

Area of rectangle = 14 × 13

= 182 sq.m

6. Find the area of a square of length 12cm.

Area to square = side × side

= 12 × 12

= 144 sq.m

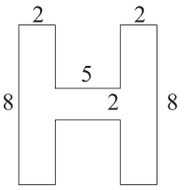
7. Calculate the area of the figure :

Area of figure = Area of I + Area of II + Area of III

= 2 × 8 + 5 × 2 + 2 × 8

= 16 + 10 + 16

= 42 sq. units



8. If the perimeter of a square is 284 sq. cm. Find the length of its side.

Perimeter = 284 sq.cm

Length = $\frac{\text{Perimeter}}{4} = \frac{284}{4} = 71\text{cm}$

9. A square field of length 13 m is to be fenced. What will be the cost of fencing if the rate of fencing is ₹ 14 per m.

Side of fuld = 13 m

Perimeter = 13 × 4

= 52 m

Cost of fency = Perimeter × rate

= 52 × 14

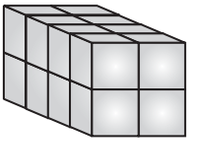
= ₹728

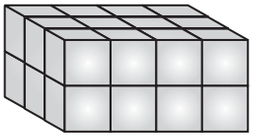
Exercise 15.3

1. Find the volumes of the given objects. Each side of the cube 1 unit.

(a) Since, the number of cubes in the given figure is = 16

$\therefore$ the total volume will be = 16 cubic unit



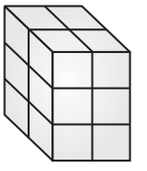


(b) Since, the total number of cubes in the given figure is = 24

$\therefore$ the total volume = 24 cubic unit

(c) Since, the total number of cubes in the given figure is = 12

$\therefore$ total volume = 12 cubic unit



2. Find the volumes of the cubes with the sides given below.

(a) side = 13 m
= $(13 \times 13 \times 13)$
= 2197 cubic m

(b) side = 7 cm
= $(7 \times 7 \times 7)\ cm^3$
= 343 cubic cm

(c) side = 1.1 mm
= $(11 \times 11 \times 11)\ mm^3$
= 1.331 cubic m

(d) side = 8.0 cm
= $(8 \times 8 \times 8)$ m
= 512 cubic cm

3. Find the volumes of the cuboids with the sides given below.

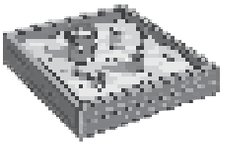
(a) length = 4m, breadth = 3m and height = 7 m
$(4 \times 3 \times 7)$
84 cubic m

(b) length = 5 cm, breadth = 3 cm, and height = 7 cm
$(5 \times 3 \times 7)$
105 cubic cm

(c) length = 5 mm, breadth = 3.2 mm, and height = 2 mm
$(5 \times 3.2 \times 2)$
32 cubic mm

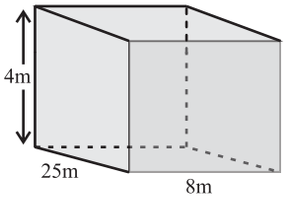
4. A square sandpit is 4 m long, 4 m wide and 4 m deep. Find the volume of the sand inside it, if the sand is filled up completely.

Volume of sand in the sandpit = $4 \times 4 \times 4$
= 64 cubic m



5. A water tank is 25 m long and 8 m wide. If the depth of the tank is 4 m, find the volume of the water in the tank.

L = 25 B = 8 m
4 = 4 m
V = $25 \times 4 \times 8$
V = 800 cubic m



6. The edge of a cubical box is 18m. Find its volume.

$V = 18 \times 18 \times 18$

$= 5832$ cubical m

7. There are two cubical tanks in a building, tank 1 is of length 13 cm and tank 2 has a capacity of 3000 cubic cm. Which tank has more capacity?

Tank 1			**Tank 2**	
Length	=	13 cm	capacity =	3000 cubic cm
Capacity/volume	=	$13 \times 13 \times 13$		
	=	2097 cubic cm		

$\therefore$ Tank 2 has more capacity

SELF ASSESSMENT-15

Choose the correct options. (Questions 1 to 5)

1. Perimeter of a square is _____.

   Perimeter of square = $4 \times$ side

   Ans : option (b)

2. **The perimeter of a triangle with sides 2 cm, 3 cm, 4 cm is _____.**

   Perimeter = $2 + 3 + 4 = 9$ cm

   Ans : option (b)

3. **Volume of a cuboid is _____.**

   Volume of cuboid = $L \times b \times h$

   Ans : option (b)

4. **The area of a square of side 8 cm is _____.**

   Area = $8 \times 8 = 64$ cm^2

   Ans : option (a)

5. **A cuboid has _____ face**

   Ans : option (b)

6. **A rectangular block of iron measure 18 cm long, 12 cm wide and 6 cm high. Find the volume of the block.**

   Volume = $18 \times 12 \times 6$

   = 1296 cubic cm

7. **A rectangular garden is of the length 25 m and width 17 m. Find the length of the boundary of the garden.**

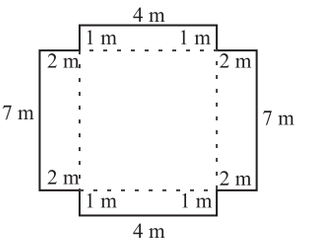
   Length of Boundary = perimeter = $2 \times (c + b)$

   = $2 \times (25 + 17)$

   = 2×42

   = 84 m

8. Find the perimeter of the figure.



Perimeter of figure = $2+1+4+1+2+7+2+1+6\,4+1+2+7$

= 34 m

9. A swimming pool is 8m long, 5m wide and 3 m deep. Find the volume of the swimming pool?

Volume = $L \times b \times 4$

= $8 \times 5 \times 3$

= 120 cubic m

Chapter-16 Time and Money

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
Reading time and relationship between different units of time operations like Addition, subtraction, multiplication and division of time. Calculation of time durations.	Learners will be able to perform inter concern of time and also perform operation and calculation based on time.	Conduct activities involving calculation of time. Use a model of clock to show a time and then show another time and ask the students to calculate the time elapsed.	A flight took off at 10 : 30 pm and took 7 hours to complete its jouraey what time did the flight land.
Concept of money and daily life problems involving money and calculation of money.	Learners will be able to do calculations based on money.	Exact and create a classroom scenaris where group of girls have a stall selling items. Make them prepare a list of the items sold with price. Students as customers enact to go and buy items. They calculate the amount to paid and prepare a bill.	Ravi and Sunil goes to tea shop and buys a tea for ₹5.75 and a biscuit for ₹2.00. How much money do they need to pay?

Exercise 16.1

1. Fill in the blanks.

(a) 1 year = **365** days

(b) 2 minutes = **120** seconds **60 × 2 = 120 second**

(c) 60 days = **2** months **30 × 2 = 60**

(d) 1 year = **12** months

2. Convert the following.

(a) $4\frac{1}{2}$ hours into min

$\frac{9}{2}$ hrs into min

$\frac{9}{\cancel{2}} \times \cancel{60}^{30} = 270$ min

(b) 17 hours 5 minutes into minute

$(17 \times 60) + 5$

$= \quad 1020 + 5$

$= \quad 1025$ min

(c) 420 seconds into minutes.

$\frac{\cancel{42}^{7}\cancel{0}}{\cancel{6}\cancel{0}} = \quad 7$ min

(b) 420 minutes into second

420×60

25200 sec

(e) 360 min into hours

$\frac{\cancel{36}^{6}\cancel{0}}{\cancel{6}\cancel{0}} = \quad 6$ hours

(f) 3 years 11 months into months.

$3 \times 12 \quad = \quad 36 + 11$

$= \quad 47$ months

(g) 65 months into years

65 months = 5 years 5 months

3. Compare using >,< or =.

(a) 8 minutes > 170 seconds

(b) 1 hour < 65 minutes

(c) 3600 seconds = 60 minutes

(d) 2 year < 120 weeks

(e) 5 hours < 500 minutes

4. Express these in days.

(a) a year
365 days

(b) a month
30 days

(c) a week
7 days

Exercise 16.2

1. Add the following.

(a) 1 hour 12 minutes + 2 hours 20 minutes

	hr	mins
	1	12
+	2	20
	3	32

Ans : 3 hours 32 mins

(b) 5 hours 20 min + 7 hours 30 mins

	hr	mins
	5	20
+	7	30
	12	50

Ans : 12 hours 50 mins

(c) 14 min 30 secs + 15 min 45 secs

hr	secs
14	30
+ 15	45
29	75

∵ 60 sec = 1 min

75 sec = 1 min 15 secs

∵ 30 mins 15 seconds

(d) 5 days 18 hours and 6 days 22 hours

Days	hours
5	18
+ 6	22
11	40

40 hours = 1 day + 16 hours

Ans : 12 day 16 hours

2. Subtract:

(a) 35 mins 29 seconds from 94 mins 38 seconds

mins	secs
94	38
− 35	29
59	09

Ans : 59 mins 09 secs

(b) 4 years 11 months from 7 years

Days	hours
5	18
+ 6	22
11	40

Ans : 2 yrs 1 months

(c) 19 hours from 23 hours 45 mins

hrs	mins
23	45
− 19	00
4	45

Ans : 4 hrs 45 mins

(d) 47 years 8 months from 81 years 2 months

years	months
~~81~~ ⑧⓪	~~2~~ ⑭
+ 47	8
33	6

Ans : 33 years 6 months

3. Multiply:

(a) 5 days 2 hours by 15

5 days 2 hours

× 15

75 days 30 hours

24 hrs = 1 day.

∴ 76 days 6 hours.

(b) 14 minutes 20 secpmds by 4

× 4

56 mins 80 1 min 20 sec

57 mins 20 seconds.

(c) 3 years 5 months

× 7

21 years 35 months (2 year + 11 months)

Ans : 23 years 11 months

4. Divide:

(a) 8 minutes 3 seconds by 3

$= 8 \times 60 + 3$

$= 480 + 3$

$= 483$

$\therefore 483 \div 3 = 161$ seconds

$$\begin{array}{r} 161 \\ 3\overline{)483} \\ -3\downarrow \\ \hline 18 \\ -18\downarrow \\ \hline 3 \\ -3 \\ \hline \end{array}$$

161 seconds or 2 mins 41 seconds.

(b) 21 days 3 hours by 3

$= 21 \times 24 + 3$ hours

$= 504 + 3$

$= 507 \div 3$

$=$ 169 hours or 7 days 1 hours

$$\begin{array}{r} 169 \\ 3\overline{)507} \\ -3\downarrow \\ \hline 20 \\ -18\downarrow \\ \hline 27 \\ -27 \\ \hline \end{array}$$

(c) 600 months by 4

$$\begin{array}{r} 150 \\ 4\overline{)600} \\ -4\downarrow \\ \hline 20 \\ 20\downarrow \\ \hline 0 \\ \hline \end{array}$$

5. Suman sleeps for 7 hours 30 minutes in a day. For how many hours did she sleep in 2 days?

Suman sleeps – 7hours 30 minutes is a day

in 2 days she sleeps = 7 hours 30 mins × 2

7 hr	30	
	2	
14 hr	60	mins

= 15 hours

Ans : Suman sleeps for 15 hours in 2 days.

6. Monica travelled 3hrs 45 mins by bus and 5 hrs 30 mins by train. Calculate the time she spent in travelling.

Time taken to travel by bus = 3 hrs 45 mins

Time taken to travel by train = 5 hrs 30 mins

8 hrs 75 mins (60 + 15)

= 9 hrs 15 mins

∴ Monica spent 9 hrs 15 mins in travelling.

7. Seema was 3 years 4 months old when she joined school. Today she is 11 years 8 months old. For how long has she been in school?

Seema is 11 years 8 months

Seema was 3 years 4 month

8 yrs. 4 month

Seema had been 8 yrs 4 months is school.

8. Sunita leaves Kolkata by train at 8 : 45 p.m. and reaches Patna at 6 : 30 a.m. next day. How long did she travel?

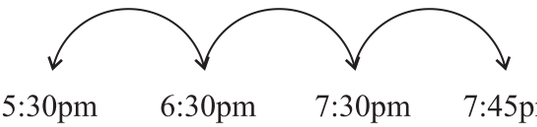
Time taken is 8 : 45 pm to 6 : 30 cm

= 9 hours 45 minutes

Exercise 16.3

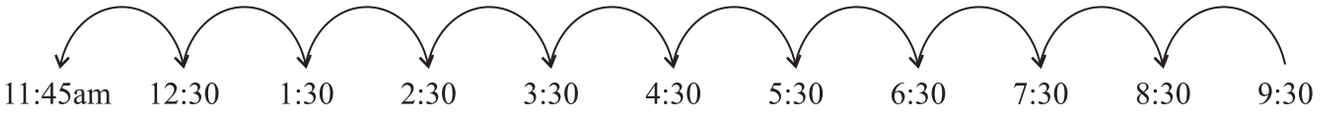
1. The duration of a show is 2 hours 15 minutes. It starts at 5:30 p.m. When will it end?

Duration of the show = 2 hours 15mins



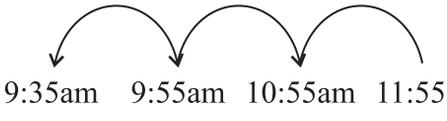
∴ The show will end at 7:45 pm

2. It takes Sam 9 hours 45 minutes to reach his home from the city. If he reaches home at 9:30p.m, at what time did he start his journey?



Sam started his journey at 11:45 am

3. The Kolkata super fast express arrives at Kolkata at 11:55 a.m. It reached Kolkata 2 hrs 20 mins late. What is the new scheduled arrival time of the train?



The scheduled arrival was at 9:35 am.

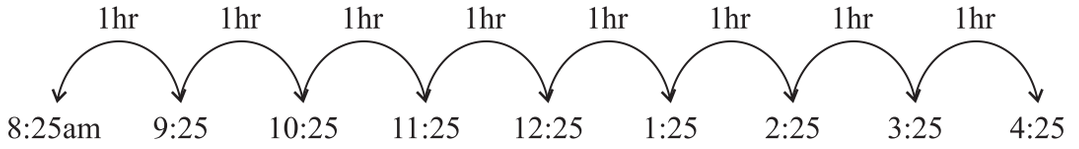
4. Shilpa went on a holiday from 20th August for 28 days. When did her holiday end?

20^{th} August + 28 days = 12 days (August) + 16 days (September)
= 16^{th} September

∴ Shilpa holiday will end on 16^{th} September.

5. A flight left its origin at 8:25a.m. and reached its destination at 4:15 p.m. How long did the flight travel?

Time taken =



∴ Flight traveled for 7 hours 50 mins.

Exercise 16.4

1. Solve :

(a)

₹	p
34	25
−18	30
15	95

(b)

₹	p
45	33
+18	95
64	28

(c)

₹	p
100	00
−30	75
69	25

2. Add the following:

(a) ₹78.75, ₹8.50, ₹36.55

(2) (1) (1)	
78	75
8	50
+36	55
₹123	80

(b) ₹1001.90, ₹4.90

(1)	
1001	90
+ 4	90
1006	80
₹1006	80

3. Subtract:

(a) ₹800 − ₹89.95p

(7) (9) (9) (9) (10)	
~~8~~ ~~0~~ ~~0~~	~~0~~ ~~0~~
−89	95
₹710	05

(b) ₹329.25p from ₹588

(7) (17) (9) (10)	
5 ~~8~~ ~~8~~	~~0~~ ~~0~~
−329	25
₹258	75

4. Punita bought a dress for ₹525.39 and spent ₹139.85 for a pair of sandals. How much money did she spend?

Cost of dress = ₹525.39
Cost of sandals = ₹139.85
Total money spent = ₹525.39 + ₹139.85
= ₹665.24

525	39
+139	85
₹665	24

∴ Punita spent ₹665.24

5. Sarita bought a kurti for ₹342.35 and spent ₹25 for alteration charges. How much total money did she spend?

Cost of kurti = ₹342.35
Money spent on alteration = ₹25.
Total money spent = ₹342.35 + 25
= ₹367.35

	3	4	2 .	3 5
+	2	5 .	0	0
	3	6	7 .	3 5

∴ Sarita spent ₹367.35

6. Rishi bought a book for ₹30.25 and sold it for ₹2.75 less. How much money did he get for the book?

Cost of book = ₹30.25
Sold it for = ₹2.75 less
Money got after selling = ₹30.25 + ₹2.75
= ₹27.50

	3	0 .	2	5
−	2 .	7	5	
	2	7 .	5	0

∴ Rishi got ₹27.50 for the book.

Exercise 16.5

1. Multiply the following.

(a) ₹13.35 × 9

₹		p
1	3 .	3 5
		× 9
₹1	2 0 .	1 5

(b) ₹105.33 × 4

₹		p
1 0	5 .	3 3
		× 4
₹4	2 1 .	3 2

(c) ₹805 × 5.5

₹		p
8 0	. 5	0
	× 5	5
4 0	2 5	0
4 0	2 5	0 ×
₹4	4 2 7	5 0

2. Divide :

(a) ₹42.90 by 3

$$3\overline{)4290}\ (1430$$
$$-3\downarrow$$
$$12$$
$$-12\downarrow$$
$$09$$
$$-9\downarrow$$
$$00$$

Ans: ₹14.30

(b) ₹428.40 ÷ 12

$$12\overline{)42840}\ (3570$$
$$-36\downarrow$$
$$68$$
$$-60\downarrow$$
$$84$$
$$-84\downarrow$$
$$0$$

Ans: ₹35.70

(c) ₹1315.20 by 12

$$12\overline{)131520}\ (10960$$
$$-12\downarrow$$
$$11$$
$$-0\downarrow$$
$$115$$
$$-108\downarrow$$
$$72$$
$$-72\downarrow$$
$$00$$

Ans: ₹109.60

3. Multiply: ₹403.50 × 25

₹	p
403.50	
× 25	
201750	
80700×	
₹1008750	

Ans: ₹1008750

4. Divide: ₹428.40 ÷ 12

```
   3570
12)42840
  -36↓
   ---
    68
   -60↓
   ---
    84
   -84↓
   ---
     0
```

Ans: ₹35.70

5. 26 kg of wheat costs ₹1359.80. What is the cost of 1 kg wheat?

Cost of 26 kg wheat = ₹1359.80
Cost of 1 kg wheat = ₹1359.80 ÷ 26
= ₹52.30

```
   5230
26)135980
  -130↓
   ---
    59
   -52↓
   ---
    78
   -78↓
   ---
     00
```

6. A labourer earns ₹8535 in a month. What is his annual earning?

A labourer earns = ₹8535
Annual earnings = ₹8535 × 12
= ₹1,02,420

∴ The labourers annual earning is ₹1,02,420

₹	p
8535	
× 12	
17070	
8535×	
102420	

7. The cost of a pair of sunglasses is ₹245.10. How much will 48 such sunglasses cost?

Cost of sunglasses = ₹245.10
Cost of 48 sunglasses = ₹245.10 × 48
= ₹11,764.80

∴ The cost of 48 sunglasses is ₹11,764.80

₹	p
24510	
× 48	
196080	
98040×	
1176480	

SELF ASSESSMENT-16

Choose the correct options. (Questions 1 to 5)

1. How many seconds are there in a day?

Ans : option (c)

2. ₹187.85 = _____ p

₹187.85 × 100 = 18785p

3. Sushrita is 3 years 5 months old. What is her age in months?

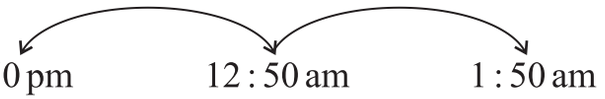
3 years 5 months

= 3 × 12 + 5

= 36 + 5 = 41 months

Ans : option (c)

4. It is 11 : 50 p.m. now. What will be the time after 2 hours?

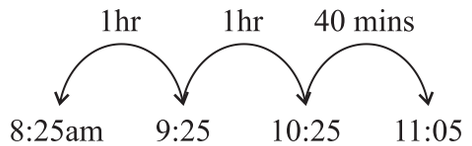


Ans : option (b)

5. ₹145.33 × 100 = ₹ _____

Ans : option (a)

6. Aishi went to the market at 8:25 a.m. and returned at 11:05 a.m. For how long was she in the market?



Aishi was in the market for 2 hrs 40 mins

7. Subtract 6 years 10 months from 16 years 8 months.

16	yrs	20	months
– 6	yrs	10	months
9	yrs	10	months

8. The cost of a T-shirt is ₹220.50p. What will be the cost of 25 such shirts?

Cost of 1 T-shirt = ₹220.50

Cost of 25 T-shirts = ₹220.50 × 25

= ₹5512.50

2	2	0	.	5	0
			×	2	5
1	1	0	2	5	0
4	4	1	0	0	×
5	5	1	2	5	0

9. Convert the following.

(a) 7 hours to seconds.

= 7 × 60

= 420 seconds

(b) ₹ 15 to paise.

= ₹ 15 × 100

= 1500 p

(c) ₹ 25.33 to paise.

= ₹ 25.33 × 100

= 2533 p

Chapter-17 Data Handling

Topics	Learning Outcomes	Teaching Learning Activity	Questions on Hots
A	T	W	5

Exercise 5.2

1. A school library has fiction books, science books and mathematic books and some other subject books. The pictograph below shows the data.

(a) Which categories of books are maximum in number?

(b) What is the count of science books in the library?

(c) What is the total number of books in the library?

(i) Fiction books are maximum in number.

(ii) Science books = $3 \times 10 = 30$

(iii) Total books = $17 \times 10 = 1700$ books

Months	Number of Books
Fiction	
Science	
Mathematics	
Other subjects	

1  = 10 books

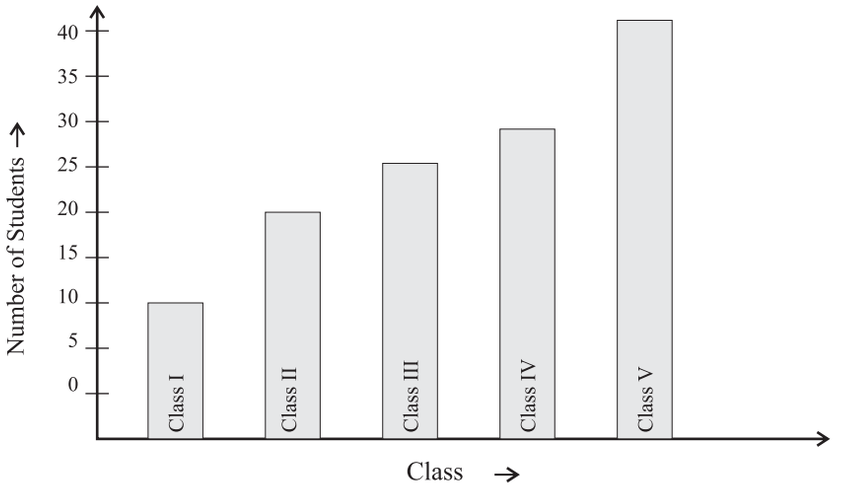
2. The number of students who scores above 80% in mathematics in each class is represented by a bar graph shown below.

Ans:

(a) 20 students of class II has scared above 80%

(b) Class V has maximum number of students above 80%

(c) 30 students of class IV has scared above 80% in mathematics.



3. The given pie chart depicts the number of marbles owned by 5 friends. Read the chart carefully and answer the given questions.

Ans:

(a) Saksham has 80 marbles.

(b) Arya and Naman has equal number of marbles.

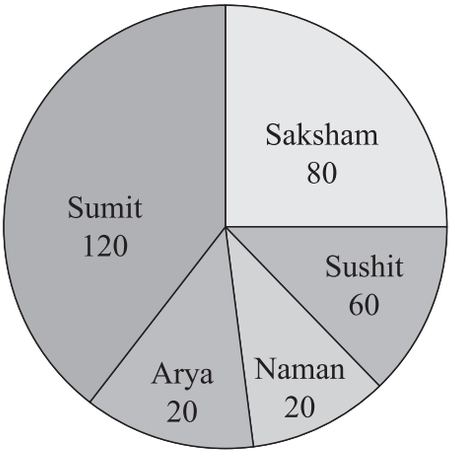
(c) Sumit has (120-80) more marbles

= 40 marbles

(d) Sushit + Naman = 60 + 20 = 80 marbles.

(e) Total = 120 + 80 + 60 + 20 + 20

= 300 marbles



4. A baby's weight from the time of her birth to 10 months is shown below using a line chart.

Ans:

(a) Baby is 3 kg at birth.

(b) Baby's weight is 10 months is 9 kgs

(c) Increase = 10 – 6

= 4 kgs

(d) The baby's weight is same in 7th, 8the, 9th and 10 maths.

5. Given below shows the sales of the different types of shoes sold in a shop. Complete the table and answer the following questions.

Items	Tally Marks	Frequency
Boots	𝍸 𝍸 𝍸 | | |	18
Sandal	𝍸 | |	7
Flip flops	𝍸 𝍸 𝍸 𝍸	20
Heels	| | |	3
Wedges	𝍸 𝍸	10

6. Study the bar graph given alongside and answer the given questions.

Ans :

(a) 30 babies were born is April.

(b) In March maximum number of babies were born.

(c) 40–30 = 10 more babies were born in March than February.

(d) Total babies is 4 months = 20 + 30 + 40 + 30

= 120 babies

SELF ASSESSMENT-17

Choose the correct options. (Questions 1 to 4)

1. Class III have maximum number of children

   Ans : option (c)

2. There are 30 children in class IV

   Ans : option (b)

3. Class I has 45 students.

   Ans : option (a)

4. There are 40 students in class

   Ans : option (b)

Class	Number of students
I	
II	
III	
IV	

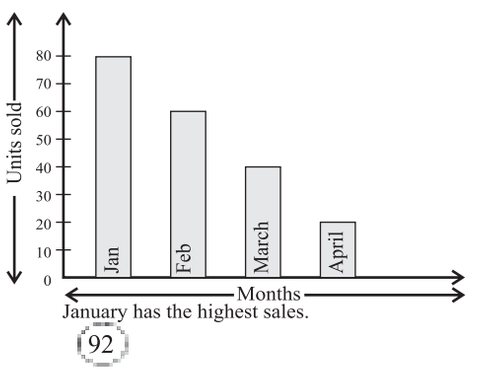
= 10 students

5. The table below show the sales of computer in 4 months.

Month	Units sold
January	80
February	60
March	40
April	20

Represent the data using a bar graph.

Which month had highest sales?



January has the highest sales.

WORKSHEET

Worksheet-1

1. $4+(7\times 9)=\mathbf{67}$ **2.** $0.7=\dfrac{\mathbf{7}}{\mathbf{10}}$ **3.** 246793 in international system = 2,46,793

4. $\dfrac{2}{3}\times 18=\mathbf{12}$ **5.** Quadrilateral has 4 sides **6.** $\dfrac{3}{5}-\dfrac{1}{5}=\dfrac{2}{5}$

7. $363-112$

$\dfrac{112}{251}=251$

8. $4\times 700=\mathbf{2800}$ **9.** $64\div 8=8$

10. $2600-400+400=2600$

Worksheet-2

1. $5.5\div 100=0.055\text{m}$ **2.** $(4\times 7)-(5\times 4)=28-20=8$ 3. $\dfrac{17}{6}=\dfrac{25}{6}$

4. $350+350=700$ **5.** 4 lakh 36 thousand 2 hundred 4tens and 5 ones

6. $23=2\times 2\times 2=8$ **7.** $85\times 2000=170000$

8. A polygon has 5 sides. **9.** 11 : 10 am

10. Smallest digit = 2078

Worksheet-3

1. place value of 8 is 876545 is **800000** **2.** Halfway of 30 and $60=\dfrac{30+60}{2}=\dfrac{90}{2}=45$

3. $\dfrac{4}{7}=\dfrac{\mathbf{16}}{\mathbf{28}}$ (multiplied by 4) **4.** 1 quintal = **100 kg** **5.** $18\text{ m}=18\div 1000=0.018\text{ km}$

6. $23=2\times 2\times 2=8$

2	0	0	0	
+	8	4	5	
2	8	4	5	

7. 7295×1000

7295000

8. $2678\times 90\times 1357\times 0=\mathbf{0}$

9. $10,00,000-1=999999$ **10.** 80,36,475

Worksheet-4

1. 37 is a prime number

2.

7	0	0	0
		− 7	0
6	9	3	0

3. $\dfrac{3}{\cancel{4}}\times \cancel{12}^{3}=9\text{ months}$

4. $15\times 100=1500$

5. $240\times 1000=240000\text{ g}$

6. 849 to nearest hundred = 800 **7.** $35\times 5=₹175$ **8.** Yes it is same

9. tonne **10.** 48 half hours make a day.

Worksheet-5

1. $832 + 18 = \mathbf{850}$ **2.** 2 m **3.** $\frac{2}{6}$ or $\frac{1}{3}$ **4.** 1100, 2200, 3300, 4400, 5500

5. Triple of 40 is 120 **6.** $4000 - 3000 = 4000$ **7.**

	6	5	9	1
–	1	4	7	0
	5	1	2	1

8. Yes same **9.** $8332 - 4000 = 4332$ **10.** 0

Worksheet-6

1. 52 weeks **2.** face value = 5 **3.** 495 to nearest 10 = 4+90

4. $64 \times 5 + 36 + 4$
$= 320 + 40$
$= 360$

5. $\frac{2}{4} = \frac{16}{32}$ **6.** Successor of 89456 = 89457

7. $450 - 310 = 140$ **8.** $43972 \times 10000 = 439720000$

9. $\frac{4}{9} < \frac{8}{9}$ **10.** Remainder = 9

Worksheet-7

1. No, because 601 is not a multiple of 2 **2.** 7 : 30 am **3.** $645 + 300 + 5 = 950$

4. $5 \times 20 + 5 = 100 + 5 = 105$ **5.** 1 century = **100** years **6.** $250 + 125 = 375$

7. $500 - (118 + 202)$
$500 - 320$
$= 180$

8. $\frac{8}{12} < \frac{10}{12}$ **9.** 49, 800 **10.** $420 \div 2 = 210$

Worksheet-8

1. PV = 70 **2.** $185 \times 7 = 12950$ **4.** $48 + 22 = 70$ **5.** ₹80 = 8000 p

6. 86 L = 86×1000 = 86000 mL **7.** $2.85 \times 100 = 285$

8. 3 years = 52×3
= 156 weeks

9. $6.12 = \frac{612}{100}$ **10.** 625.65

Worksheet-9

1. Twenty six lakh farty seven thousand eight hundred eighty three

2. $7.56 \div 100 = 0.0765$ **3.** $\frac{6}{10 \times \cancel{100}} \times \cancel{100} = \frac{6}{10}$ **4.** 9,99,9,999 + 1 = 10,000,000

5. $2.3 \times 1.5 = 3.45$ **6.** $\frac{4}{7} + \frac{1}{14}$
$= \frac{8+1}{14} = \frac{9}{14}$ **7.** $422 + 88 = 510$

8. $2\frac{1}{2}$ year $= \frac{5}{\cancel{2}} \times \cancel{12}^{6}$
$= 30$ months

9. 25 kg = 25×1000 = 25000g

10. 2 hectogram = 200 g

Worksheet-10

1. $7^3 = 7 \times 7 \times 7 = 343$

2. $3654 \times 17 = 62118$

3. $PV = 8000 + 8 = 8008$

4. $4000 + \frac{6}{10} = 4000.6$

5. $\frac{1}{\cancel{3}} \times \cancel{39}^{13} = 13$

6. ₹250 = 250 × 100
= 25000p

7. $(24 \div 8) + 635 - 520$
$= 7 + 635 - 420$
$= 642 - 420$
$= 222$

8. 8654 to highest place (thousand)

9. Successor of 789999 = 790000

10. $785 - 250 - 50$
$= 485$