

2

NUMBERS 1 TO 9

The Idea of Zero Let's Do**Fill in these empty circles.**

1. You had 5 oranges and 5 were eaten, so 0 oranges are left.
2. There were 3 cars and 3 went away, so 0 cars are left.
3. There were 6 burgers and 6 were sold, so 0 burgers are left.

More or Less Let's Do**B. Put the correct sign $>$ or $<$.**

- | | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 1. $6 > 1$, | 2. $4 > 2$, | 3. $8 < 9$, | 4. $5 > 3$, | 5. $9 > 8$, |
| 6. $2 < 6$, | 7. $1 < 3$, | 8. $7 > 6$ | 9. $5 > 4$, | 10. $3 > 1$ |

Equal Let's Do

- | | | | |
|------------|--------------|--------------|--------------|
| 1. $1 = 1$ | 2. $6 < 8$, | 3. $7 < 8$, | 4. $9 > 5$, |
| 5. $4 < 6$ | 6. $3 = 3$, | 7. $6 < 8$, | 8. $2 = 2$ |

Before, After, In Between Let's Do**A. What comes before?**

- | | | | | |
|-------|-------|-------|-------|------|
| 1. 2, | 2. 5, | 3. 8, | 4. 3, | 5. 6 |
|-------|-------|-------|-------|------|

B. What comes after?

- | | | | | | |
|-------|-------|-------|-------|-------|------|
| 1. 4, | 2. 8, | 3. 5, | 4. 9, | 5. 7, | 6. 6 |
|-------|-------|-------|-------|-------|------|

C. What comes in between?

- | | | | | | |
|-------|-------|-------|-------|-------|------|
| 1. 4, | 2. 8, | 3. 2, | 4. 6, | 5. 7, | 6. 8 |
|-------|-------|-------|-------|-------|------|

Number Ordering Let's Do**A. Arrange these numbers in increasing order**

2. 3, 8, 4, 5 3 — 4 — 5 — 8
3. 2, 6, 1, 3 1 — 2 — 3 — 6
4. 1, 7, 5, 8 1 — 5 — 7 — 8

B. Arrange these numbers in decreasing order

2. 5, 3, 8, 2 8 — 5 — 3 — 2
3. 7, 2, 4, 6 7 — 6 — 4 — 2
4. 2, 7, 9, 3 9 — 7 — 3 — 2

MCQs**Choose the correct answer**

1. (d) 6,
2. (b) 8

Let's Revise

A. Write the numbers or number names

1. 7 — Seven

2. 5 — Five

3. 9 — Nine

4. 3 — Three

B. Complete the number names

2. SVN: SEVEN

3. FVE: FIVE

4. EIT: EIGHT

C. Circle the smaller number

1. 3,

2. 1,

3. 1

4. 0

5. 8

6. 3

D. Circle the bigger number

1. 7,

2. 9,

3. 3,

4. 7,

5. 4

6. 5

E. Draw the balls and number them in the small boxes based on their actual size:

Basket ball (The largest)

Cricket ball (Medium)

Table-tennis ball (The smallest)

F. Before, After, or In Between

1. 2,

2. 5,

3. 5,

4. 3,

5. 1

6. 6

G. Fill in the Missing Numbers

1. 2 [3] 4 [5] [6] 7

2. 5 [6] 7 [8] 9



ADDITION

Let's Do (Addition Two Numbers)

B. Count and add.

1. 8,

2. 9

C. Add by drawing lines.

2. 8,

3. 9,

4. 9

Addition Facts

Addition Facts of 2

$$0 + 2 = 2$$

Addition Facts of 3

$$1 + 2 = 3$$

$$0 + 3 = 3$$

Addition Facts of 4

$$1 + 3 = 4$$

$$0 + 4 = 4$$

Addition Facts of 5

$$1 + 4 = 5$$

$$0 + 5 = 5$$

Addition Facts of 6

$$3 + 3 = 6$$

$$2 + 4 = 6$$

$$1 + 5 = 6$$

Addition Facts of 7 : $4 + 3 = 7$ $3 + 4 = 7$ $2 + 5 = 7$ $1 + 6 = 7$
 $0 + 7 = 7$

Addition Facts of 8 : $5 + 3 = 8$ $4 + 4 = 8$ $8 + 0 = 8$ $7 + 1 = 8$
 $6 + 2 = 8$ $5 + 3 = 8$ **$4 + 4 = 8$** **$3 + 5 = 8$** **$2 + 6 = 8$** **$1 + 7 = 8$**
 $0 + 8 = 8$

Addition Facts of 9 : $9 + 0 = 9$ $8 + 1 = 9$ $7 + 2 = 9$ $6 + 3 = 9$
 $5 + 4 = 9$ $4 + 5 = 9$ $3 + 6 = 9$ $2 + 7 = 9$ $1 + 8 = 9$ $0 + 9 = 9$
Addition Facts of 10 : $10 + 0 = 10$ $9 + 1 = 10$ $8 + 2 = 10$ **$7 + 3 = 10$**
 $6 + 4 = 10$ $5 + 5 = 10$ $4 + 6 = 10$ $3 + 7 = 10$ $2 + 8 = 10$ $1 + 9 = 10$
 $0 + 10 = 10$

WORD PROBLEM :

Birds: $3 + 3 = 6$ birds

Toffees: $1 + 5 = 6$ toffees

Cats: $4 + 2 = 6$ cats

Flowers: $7 + 2 = 9$ flowers

Mental Maths : Add

a. $1 + 0 = 1$

b. $0 + 1 = 1$

c. $2 + 1 = 3$

d. $3 + 1 = 4$

e. $4 + 1 = 5$

f. $5 + 1 = 6$

MCQs

Choose the correct answer

1. (c) 9, 2. (b) 5 apples

Let's Revise

A. Fill in the blanks

1. $0 + 4 = 4$

2. $3 + 6 = 9$

3. $2 + 4 = 6$

4. $5 + 3 = 8$

B. Check the addition

1. $2 \text{ birds} + 4 \text{ birds} = 6 \text{ birds} \rightarrow (\text{Correct})$

2. $3 \text{ butterflies} + 3 \text{ butterflies} = 6 \text{ butterflies} \rightarrow (\text{Correct})$

C. Fill in the blank boxes

1. $7 + 1 = 8 = 3 + 5$

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

3. $6 + 2 = 8 = 4 + 4$

4. $2 + 3 = 5 = 1 + 4$

D. Write the missing numbers

1. $6 + 2 = 8$

2. $0 + 4 = 4$

3. $3 + 2 = 5$

4. $0 + 6 + 3 = 9$

5. $1 + 4 + 3 = 8$



SUBTRACTION

Let's Do

2. Cricket Bats	Total: 7	Crossed out: 2	Equation: $7 - 2 = 5$
3. Candles	Total: 9	Crossed out: 5	Equation: $9 - 5 = 4$
4. Balloons	Total: 5	Crossed out: 2	Equation: $5 - 2 = 3$
5. Mobile Phones	Total: 8	Crossed out: 5	Equation: $8 - 5 = 3$

Let's Do (Vertical Method of Subtraction)

Strike out and subtract

1. $7 - 1 = 6$, 2. $4 - 3 = 1$, 3. $9 - 7 = 2$ 4. $6 - 2 = 4$

Word Problem

1. Birds on a Branch Total birds : 8 Birds that flew away : 2

Calculation: $8 - 2 = 6$,

Answer: There are 6 birds left on the branch.

2. Picnic Students Total students: 9 Number of girls: 6

Calculation: $9 - 3 = 6$

Answer: 3 boys went on the picnic.

3. Kamla's Eggs Total eggs bought: 7 Broken eggs: 1

Calculation: $7 - 1 = 6$

Answer: There are 6 eggs left.

4. Dolls Comparison Meenu's dolls: 8 Renu's dolls: 5

Calculation: $8 - 5 = 3$

Answer: Meenu has 3 more dolls than Renu.

MCQs

Choose the correct answer

1. (c) 6, 2. (c) 0, 3. (c) 0

Let's Revise

- A. 1. $4 - 1 = 3$ 2. $9 - 6 = 3$
B. $9 - 7 = 2s$
C. $3 + 2 - 2 = 3$
D. 1. $6 + 2 = 8$, 2. $5 - 5 = 0$, 3. $6 - 2 = 4$



NUMBERS 11 to 20

Let's Start

Beads	Fingers	Number	Number Name
(None)	(None)	0	Zero
1 Bead	1 Finger	1	One
2 Beads	2 Fingers	2	Two
3 Beads	3 Fingers	3	Three
4 Beads	4 Fingers	4	Four
5 Beads	5 Fingers	5	Five
6 Beads	6 Fingers	6	Six
7 Beads	7 Fingers	7	Seven
8 Beads	8 Fingers	8	Eight
9 Beads	9 Fingers	9	Nine

Let's Do (Match the following.)

- | | |
|-------|--------------------|
| 1. 17 | (d) 1 ten + 7 ones |
| 2. 11 | (c) 1 ten + 1 one |
| 3. 16 | (e) 1 ten + 6 ones |
| 4. 19 | (a) 1 ten + 9 ones |
| 5. 13 | (b) 1 ten + 3 ones |

Let's Do (Write True or False)

- | | |
|-----------------------------|-----------------------------|
| 1. 14 is more than 12: True | 2. $16 < 15$: False |
| 3. $11 > 19$: False | 4. 17 is less than 18: True |
| 5. $9 > 10$: False | 6. $12 > 14$: False |

Let's Do (Tick the circle with the correct answer)

- 14 is after 13
13 is before 14
16 is in between 15, 17

Let's Do

Set	Largest Number (Yellow)	Smallest Number (Green)
1.	19	10
2.	10	4
3.	18	13
4.	16	2
5.	20	15
6.	19	12
7.	16	10
8.	14	10
9.	17	15

A. Arrange the sets of numbers in increasing order.

2. 11, 12, 13, 14 3. 11, 13, 15, 17

B. Arrange the sets of numbers in decreasing order.

2. 14, 13, 12, 11 3. 17, 15, 13, 11

MCQs: Choose the correct answer.

1. (d) 16, 2. (a) smaller, 3. (a) smaller, 4. (c) 16, 5. (b) Twenty

Let's Revise

- A. 1. There are 12 mangoes in total. $12 = 1 \text{ ten} + 2 \text{ ones}$
2. There are 16 rabbits in total. $16 = 1 \text{ ten} + 6 \text{ ones}$

Section B: Match the numbers with the number names

- | | |
|-------|-------------|
| 1. 13 | b. thirteen |
| 2. 16 | d. sixteen |
| 3. 19 | a. nineteen |
| 4. 12 | e. twelve |
| 5. 20 | c. twenty |



NUMBERS 21 to 99

Let's Start

- How many children are there in each row?
There are 10 children in each row sitting at the desks.
- How many rows are there?
There are 2 rows of seated children.
- How many children are there in the two rows?
There are 20 children in the two rows .
- How many children are there in all?
There are 23 children in total (20 seated and 3 standing).

Numbers from 30 to 39

- | | | |
|-------------------|-------------------|------------------|
| 34 = thirty-four | 35 = thirty-five | 36 = thirty-six |
| 37 = thirty-seven | 38 = thirty-eight | 39 = thirty-nine |

NUmbers from 40 to 49

- | | | |
|-----------------|-----------------|-----------------|
| 43: forty-three | 44: forty-four | 45: forty-five |
| 46: forty-six | 47: forty-seven | 48: forty-eight |

Numbers from 50 to 59

52: fifty-two

53: fifty-three

54: fifty-four

55: fifty-five

56: fifty-six

57: fifty-seven

58: fifty-eight

59: fifty-nine

Numbers from 60 to 69

61 = sixty-one

62 = sixty-two

63 = sixty-three

64 = sixty-four

65 = sixty-five

66 = sixty-six

67 = sixty-seven

68 = sixty-eight

69 = sixty-nine

Numbers 71 to 79

71 = seventy-one

72 = seventy-two

73 = seventy-three

74 = seventy-four

75 = seventy-five

76 = seventy-six

77 = seventy-seven

78 = seventy-eight

79 = seventy-nine

Numbers from 83 to 89

83 = eighty-three

84 = eighty-four

85 = eighty-five

86 = eighty-six

87 = eighty-seven

88 = eighty-eight

89 = eighty-nine

Numbers from 93 to 99

93 = ninety-three

94 = ninety-four

95 = ninety-five

96 = ninety-six

97 = ninety-seven

98 = ninety-eight

99 = ninety-nine

Let's Do (Fill in the blanks boxes)

1. 4 tens + 8 ones = 48

2. 6 tens + 6 ones = 66

3. 9 tens + 8 ones = 98

4. 7 tens + 5 ones = 75

5. 23 = 2 tens + 3 ones

6. 7 tens + 1 one = 71

7. 19 = 1 ten + 9 ones

8. 58 = 5 tens + 8 ones

9. 40 = 4 tens + 0 ones

10. 9 tens + 0 ones = 90

Let's Do**A. Write True or False:**

1. False,

2. False,

3. False,

4. True

B. Write more or less in the empty boxes

1. 64 is less than 70

2. 51 is less than 56

3. 90 is more than 82

4. 43 is more than 34

LET 's DO (Before, After And In Between)

1. 40

2. 65

3. 95

4. 49

Let's Do (Number Comparison)**A. Circle the smallest number.**

33

27

21

B. Circle the largest number.

29

43

34

Let's Do (Backward Counting of Numbers)

Complete the pattern.

1. 17 15 14 12 2. 78 77 73 71

Let's Do (Number Ordering)

A. Arrange in increasing order (smallest to biggest)

1. 25, 29, 32, 41 2. 10, 25, 50, 87

B. Arrange in decreasing order (biggest to smallest)

1. 72, 60, 40, 20 2. 91, 89, 73, 67

Mental Maths

Answer the following questions.

- a. What number comes just after thirty-five? The number is 36.
- b. What number comes just before twenty-one? The number is 20.
- c. What number comes between forty-six and forty-eight?
The number is 47.

D. Solve these puzzles:

Puzzle 1 Middle: Between 32 and 34 is 33. Bottom: 10 more than 33 is 43.

Puzzle 2 Left: 1 less than 26 is 25. Right: 1 more than 26 is 27.
Bottom: 10 more than 26 is 36.

Puzzle 3 Top: 10 less than 19 is 9. Right: 1 more than 19 is 20.
Bottom: 10 more than 19 is 29.

MCQs: Choose the correct answer.

1. (d) 85 2. (a) 73 3. (d) 4

Let's Revise

A. Count the beads and fill in the boxes.

1. 3 tens + 0 ones = 30 2. 6 tens + 1 ones = 61 3. 4 tens + 2 ones = 42

B. Circle the correct answer.

- 1. 69 is just before 70. 2. 52 is just after 51.
- 3. 70 is just before 71. 4. 22 is just after 21.

C. Write True or False.

1. True 2. False 3. True 4. False



ADDITION AND SUBTRACTION

Let's Start

Problem 1: Total Fruits

She has 6 oranges and 3 bananas. How many fruits does she have in total?

$$6 + 3 = 9$$

Total fruits: 9

Problem 2: Fruits Used

She used only 2 oranges and 2 bananas. How many fruits did she use?

2 Oranges + 2 bananas = 4 fruits

Problem 3: Fruits Left

There were 9 fruits. Out of these, she used only 4 fruits. How many fruits are left with her?

$$9 - 4 = 5$$

Fruits left: 5

Let's Do (Adding 2-Digit and 1-Digit Numbers)

1. 55

2. 68

3. 29

4. 84

Let's Do (Adding 2-Digit Numbers)

1. 66

2. 97

3. 85

4. 79

Let's Do (Adding on a Numbers)

1. 44

2. 80

Let's Do (Subtract)

1. $67 - 24 = 43$

2. $44 - 14 = 30$

3. $97 - 30 = 67$

4. $78 - 65 = 13$

5. $17 - 11 = 6$

6. $35 - 20 = 15$

7. $89 - 47 = 42$

8. $94 - 82 = 12$

9. $56 - 46 = 10$

10. $15 - 15 = 0$

Let's Do (Subtract on the Numbers)

1. $59 - 5 = 54$

2. $23 - 7 = 16$

3. $85 - 9 = 76$

4. $64 - 6 = 58$

Let's Do

Deepa has 15 balloons and Priya has 29. How many do they have together?

Problem : Analysis Deepa has 15 balloons; Priya has 29 balloons.

The total number of balloons they have together.

We shall perform addition. $15 + 29 = 44$

Answer: They have 44 balloons together.

MCQs

Choose the correct answer.

1. (c) 30 bees

2. (c) 22 pe



PATTERNS

LET's DO (simple patterns)

A. Complete the pattern by colouring them.

1. 4th Box: Top = Red, Bottom = Blue

2. 5th Box: Top = Blue, Bottom = Red

3. 6th Box: Top = Red, Bottom = Blue

Shapes: The colors follow a sequence based on the shape.

Oval: Color it Pink. Square: Color it Yellow.

Triangle: Color it Blue.

B. Circle the object that comes next.

1. The Cow.

2. : The Moon.

Let's Do (Complete the number patterns)

1. (Add 10) : 20, 30, 40, 50, 60, 70, 80, 90

2. (Add 5) : 31, 36, 41, 46, 51, 56, 61, 66

3. (Add 4) : 56, 60, 64, 68, 72, 76, 80, 84

MCQs (Choose the correct answer)

1. (c)

2. (c)

Let's Revise

1. Pattern (Add 7) : 3, 10, 17, 24, 31, 38, 45, 52

2. Pattern (Subtract 9) : 90, 81, 72, 63, 54, 45, 36, 27

C. State True or False

1. True,

2. False,

3. False



TIME

Fill in the blanks:

Tuesday is the third day of the week.

Sunday comes after Saturday.

Tuesday comes before Wednesday.

Saturday comes after Friday.

Let's Do (Write the day between two days)

1. Wednesday — Thursday — Friday

2. Friday — Saturday — Sunday

3. Monday — Tuesday — Wednesday

4. Thursday — Friday — Saturday

5. Sunday — Monday — Tuesday

Let's Do A. Fill in the blanks.

1. February comes after January.

2. April comes after March.

3. May comes before June.
4. August comes before September.
5. October comes before November.

B. Name the month in which you celebrate.

- | | |
|-----------------------------|-----------------------------|
| 1. New year: January | 2. Teacher's Day: September |
| 3. Independence Day: August | 4. Christmas Day: December |

Let's Do (calender)

1. April comes after March.
2. December comes before January.
3. July comes between June and August.
4. I was born in the month of [Write your birth month here].
5. 52 weeks make one year.
6. December is the last month of the year.
7. We celebrate New Year in the month of January.
8. We celebrate Christmas in the month of December.
9. We celebrate Republic Day in the month of January.
10. January is the first month of the year

MCQs (Choose the correct answer)

- | | | | |
|-----------|------------|------------|----------|
| 1. (a) 2, | 2. (b) 12, | 3. (b) 12, | 4. (b) 7 |
|-----------|------------|------------|----------|

Let's Revise

A. Write the time.

- | | |
|--------------------------------|----------------------------------|
| 1. Two hours after 2:00: 4:00 | 2. Four hours before 12:00: 8:00 |
| 3. Between 5:00 and 7:00: 6:00 | |

C. Complete the sequence of days in a week.

Monday	Tuesday	Wednesday	Thursday	Friday
Saturday	Sunday			



MULTIPLICATION

Let's Start

- | | | |
|------|------|------|
| 1. 4 | 2. 1 | 3. 1 |
|------|------|------|

Equal Groups

Kittens Section:

There are 3 kittens in each group.

There are 2 equal groups.

Groups of Birds

There are 2 groups of birds. (Brown birds)

There are 3 birds in each group.

There are 6 birds in all.

A. Complete the sentences.

There are 3 equal groups of 4. (Pencils in cups)

There are 3 equal groups of 2. (Cookies on plates)

B. How many groups of 2?

Answer: 8

C. How many groups of 6?

Answer: 4

Let's Do (Repeated Addition)

- | | | |
|-----------------------|-----------------|--------------------|
| 1. Beach Balls | $3 + 3 = 6$ | 2 groups of 3 = 6 |
| 2. Basketballs | $3 + 3 + 3 = 9$ | 3 groups of 3 = 9 |
| 3. Mangoes in Baskets | $5 + 5 = 10$ | 2 groups of 5 = 10 |
| 4. Mugs | $2 + 2 + 2 = 6$ | 3 groups of 2 = 6 |

Let's Do (Multiplication)

1. Number of Bananas

There are 3 groups with 3 bananas in each group.

$3 + 3 + 3 = 9$ 3 twos are 9. $3 \times 3 = 9$

2. Number of Mangoes

There are 4 groups with 2 mangoes in each group.

$2 + 2 + 2 + 2 = 8$ 4 twos are 8. $2 \times 4 = 8$

Mental Maths (Complete the following)

- | | |
|----------------------|-------------------------|
| 1. 2 groups of 2 = 4 | 2. 3 groups of 2 = 6 |
| 3. 2 groups of 3 = 6 | 4. 4 groups of 3 = 12 |
| 5. $3 + 3 + 3 = 9$ | 6. $2 + 2 + 2 + 2 = 8$ |
| 7. $5 + 5 = 10$ | 8. $4 + 4 = 8$ |
| 9. $10 + 10 = 20$ | 10. $10 + 10 + 10 = 30$ |

MCQs (Choose the correct answer)

1. (d)
- $2 \times 4 = 8$
2. (d)
- $9 + 9 + 9$
3. (a) 20

Let's Revise

- 2.
- 4×2
- 3.
- 5×5
- 4.
- 10×2

B. Change to repeated addition.

- 1.
- $6 + 6 + 6$
- 2.
- $5 + 5$
3. 0 4.
- $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$

C. Look at the pictures and fill in the empty boxes.

- Burgers : $3 \times 3 = 9$
- Tents/Cones : $3 \times 9 = 27$

**MONEY****Let's Do (Counting Currency)**

A: Toy Prices (i) Car: ₹10 (ii) Doll: ₹5 (iii) Drum: ₹2 (iv) Bicycle: ₹3

MCQs: Choose the correct answer

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

Let's Revise

A. Value of currency notes and metal coins

1. ₹ 5 note = ₹ 5
2. 50p coin = 50 p
3. ₹ 20 note = ₹ 20
4. ₹ 10 coin = ₹ 10

B. Count the money and write in the box

1. ₹ 100 note + ₹ 20 note = 120
2. ₹ 10 note + ₹ 5 coin = 15
3. 50p coin + ₹ 2 coin = ₹ 2 and 50 p



DATA HANDLING

Let's Start

- How many girls are there in the given picture of garden? 2
- How many boys are there in the given picture of garden? 1
- How many dogs are there? 5
- How many birds are there? 4
- How many trees are there? 7

Counting Fruits

- How many apples does Rahul have? 2
- How many mangoes does Shyam have? 3
- What is the number of yellow fruits that Rahul has? 8
- How many apples do they both have? 6 (2 from Rahul + 4 from Shyam)
- Who has greater number of fruits? Rahul (Rahul has 11 total fruits, while Shyam has 9)

Let's Do: Animal Counting

Animal	Count
Giraffe	4
Elephant	5
Deer	2
Zebra	6
Lion	3

MCQs (Choose the correct answer)

1. (b) 8
2. Circle the cupcake

Let's Revise (Section A: Ice Cream Chart)

1. Which ice cream did his friends like best?
Chocolate (It has the highest column with 6 blocks).

2. How many friends did Rocky has [have]?
19 (4 Vanilla + 4 Mint + 6 Chocolate + 5 Strawberry).
3. Which two flavours got the same number of likes?
Vanilla and Mint (Both have 4 blocks).
4. How many more choose strawberry than mint?
1 (5 Strawberry - 4 Mint = 1).

Section B: Farm Animals

Purple Bird: 2	Horse: 3	Blue Bird: 3	Hen: 9
Sheep: 7	Cow: 4		



MODEL TEST PAPER

A. Choose the correct option.

1. (b) Twenty 2. (c) 22 pens. 3. (b) 12

B. Add the following numbers on the number line

1. $2 + 1 = 3$ 2. $3 + 2 = 5$

C. Solve the following

1. $62 + = 68$ 2. $85 + 13 = 98$ 3. $26 + 2 = 28$
4. $85 - 4 = 81$

D. Name the months in which you celebrate:

1. New year: January 2. Independence Day: August
3. Children Day: November

E. Word Problem

Calculation: $12 + 6 = 18$

Answer: She has 18 pencils in all.

F. Word Problem

Calculation: $18 - 7 = 11$

Answer: He has 11 eggs left.



NUMBERS FROM 100 TO 200

Let's Do: Place Value and Number Names

A. Complete the following by writing the numbers.

12 = 1 ten and 2 ones

46 = 4 tens and 6 ones

95 = 9 tens and 5 ones

50 = 5 tens and 0 ones

B. Write the numbers and number names.

Place Value: 0 Hundreds, 5 Tens, 1 One

Number: 51

Place Value: 0 Hundreds, 6 Tens, 2 Ones

Number: 62

Place Value: 0 Hundreds, 6 Tens, 2 Ones

Number: 62

Place Value: 1 Hundred, 6 Tens, 0 Ones

Number: 160

C. Write the numbers just before and after the given number.

68, 69, 70

41, 42, 43

47, 48, 49

Let's Do (Place value)

A. Show the numbers on the abacus.

1. 42: Draw 4 beads on the Tens rod and 2 beads on the Ones rod.

2. 85: Draw 8 beads on the Tens rod and 5 beads on the Ones rod.

B. Write the place value of:

1. 3 in 35: 30

2. 3 in 43: 3

3. 8 in 98: 8

4. 7 in 70: 70

C. Tell the place value of each underlined digit.

1. 90 — The place value of 0 is 0 (Ones).

2. 40 — The place value of 4 is 40 (Tens).

3. 88 — The place value of 8 is 80 (Tens).

Let's Do

A. Match the following by drawing lines.

1. 187

d. One hundred eighty-seven

2. 172

f. One hundred seventy-two

3. 111

a. One hundred eleven

4. 195

e. One hundred ninety-five

5. 165

b. One hundred sixty-five

6. 144

c. One hundred forty-four

B. Write the numbers shown on abacus.

- | | | | | |
|--------------|-------------|---------|---------|-------------|
| 1. Abacus 1: | Hundreds: 2 | Tens: 1 | Ones: 8 | Number: 218 |
| 2. Abacus 2: | Hundreds: 4 | Tens: 5 | Ones: 3 | Number: 453 |

Let's Do

Fill in the missing numbers before, after, or between.

- | | |
|------------------|------------------|
| 1. 119, 120, 121 | 2. 174, 175, 176 |
| 3. 160, 161, 162 | 4. 163, 164, 165 |
| 5. 148, 149, 150 | 6. 144, 145, 146 |

Let's Do

Put $<$, $>$ or $=$ as required.

- | | | |
|----------------|----------------|----------------|
| 1. $125 > 119$ | 2. $135 > 131$ | 3. $178 = 178$ |
| 4. $169 < 194$ | 5. $150 < 164$ | 6. $100 > 99$ |

Let's Do**A. Ascending Order (Smallest to Largest)**

- | | |
|------------------|------------------|
| 1. 123, 139, 159 | 2. 124, 188, 196 |
|------------------|------------------|

B. Descending Order (Largest to Smallest)

- | | |
|------------------|------------------|
| 1. 160, 142, 131 | 2. 199, 193, 158 |
|------------------|------------------|

Think of

F is the first (1st) letter of the word Friendship.

R is the second (2nd) letter of the word.

I is in the third (3rd) and ninth (9th) position.

E is in the fourth (4th) position.

N is the fifth (5th) letter of the word.

D is in the sixth (6th) position.

S is the seventh (7th) letter of the word.

H is at eighth (8th) position.

I and P is at ninth (9th) and tenth (10th) position.

Let's Do**Ordinal Numbers (11–20)**

- 14: Fourteenth
- 15: Fifteenth
- 16: Sixteenth
- 17: Seventeenth
- 18: Eighteenth
- 19: Nineteenth

Ordinal Numbers (21–30)

- 24: Twenty-fourth
- 25: Twenty-fifth
- 26: Twenty-sixth
- 27: Twenty-seventh
- 28: Twenty-eighth
- 29: Twenty-ninth

Let's Do: Count and Write

No.	Item	Count	Even or Odd
1.	Ice creams	5	odd
2.	Trees	8	even
3.	Pizzas	6	even
4.	Flowers	7	odd

MCQs

Choose the correct answer

1. (a) 200 2. (b) 70 3. (b) 5 4. (a) 4 5. (b) >

Let Revise

A. Write the number names.

1. 120 = One hundred twenty 2. 147 = One hundred forty-seven
3. 139 = One hundred thirty-nine

B. Write the place value of each digit in the given boxes.

- | | |
|------------|------------|
| 1. 1 4 7 | 2. 1 6 5 |
| 1 ---- 100 | 1----- 100 |
| 4 ----- 40 | 6 ----- 60 |
| 7 ----- 7 | 5 ----- 5 |

C. Read the abacus and form the numbers.

1. 1 hundred + 1 ten + 4 ones = 114
Number name: One hundred fourteen
2. 1 hundred + 3 tens + 6 ones = 136
Number name: One hundred thirty-six
3. 1 hundred + 6 tens + 5 ones = 165
Number name: One hundred sixty-five
4. 1 hundred + 0 tens + 9 ones = 109
Number name: One hundred nine



NUMBERS FROM 200 TO 1000

Let's Start

Toy Price List

- a. Helicopter = (158) One hundred fifty-eight rupees
b. Robot = (195) One hundred ninety-five rupees
c. Car = (120) One hundred twenty rupees

- d. Bus = (145) One hundred forty-five rupees
- e. Train = (172) One hundred seventy-two rupees
- f. Bike = (142) One hundred forty-two rupees

Write the missing numbers in the grid and speak them aloud.

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

Exercise 2.1

Write the number names.

- 1. 201 = Two hundred one 2. 344 = Three hundred forty-four
- 3. 392 = Three hundred ninety-two

Exercise 2.2

A. Write the numbers shown on the abacus.

- 1. 205 (2 beads in Hundreds, 0 in Tens, 5 in Ones)
- 2. 573 (5 beads in Hundreds, 7 in Tens, 3 in Ones)
- 3. 840 (8 beads in Hundreds, 4 in Tens, 0 in Ones)
- 4. 624 (6 beads in Hundreds, 2 in Tens, 4 in Ones)

B. Draw the beads to show the given numbers.

- 1. 215 : H (Hundreds): Draw 2 beads, T (Tens): Draw 1 bead, O (Ones): Draw 5 beads
- 2. 462 : H (Hundreds): Draw 4 beads, T (Tens): Draw 6 beads, O (Ones): Draw 2 beads
- 3. 842 : H (Hundreds): Draw 8 beads, T (Tens): Draw 4 beads, O (Ones): Draw 2 beads

Exercise 2.3

	Face Value	Place Value
1. 6 0 9	0	0
2. 5 2 1	5	500
3. 2 9 7	9	90
4. 7 1 4	4	4

Exercise 2.4

A. Write the numbers in expanded form

1. $675 = 600 + 70 + 5$

2. $102 = 100 + 0 + 2$

3. $294 = 200 + 90 + 4$

4. $994 = 900 + 90 + 4$

B. Write the numbers in short form

1. 240

2. 407

3. 699

4. 844

Exercise 2.5

A. Put the correct sign "<", ">" or "=" in each box.

$94 < 106$

$218 > 83$

$215 > 60$

$44 > 30$

$210 < 305$

$825 < 900$

$422 < 515$

$500 > 442$

$300 < 416$

B. Write the smallest number.

1. 247, 620, 242, 419 = 242

2. 102, 100, 107, 101 = 100

3. 75, 295, 162, 520 = 75

4. 140, 260, 240, 104 = 104

C. Write the largest number.

1. 222, 111, 444, 333 = 444

2. 960, 989, 920, 990 = 990

3. 194, 120, 190, 192 = 194

4. 774, 772, 776, 775 = 776

D. Put <, > or = as required.

1. $925 > 675$

2. $500 > 499$

3. $207 < 226$

4. $192 < 375$

5. $347 > 299$

6. $127 < 172$

Exercise 2.6: (Before, After and Between)

1. 764, 765

2. 909, 910

3. 671, 672

4. 221, 222, 223

5. 499, 500, 501

6. 207, 208, 209

7. 694, 695

8. 510, 511

9. 125, 126

Let's Do

A. Arrange the numbers in ascending and descending order.

1. 723, 419, 612, 578

Ascending order: 419, 578, 612, 723

Descending order: 723, 612, 578, 419

2. 327, 372, 237, 732

Ascending order: 237, 327, 372, 732

Descending order: 732, 372, 327, 237

3. 606, 808, 303, 505

Ascending order: 303, 505, 606, 808

Descending order: 808, 606, 505, 303

4. 600, 400, 900, 700

Ascending order: 400, 600, 700, 900

Descending order: 900, 700, 600, 400

5. 450, 381, 618, 745

Ascending order: 381, 450, 618, 745

Descending order: 745, 618, 450, 381

6. 705, 521, 936, 278 Ascending order: 278, 521, 705, 936
Descending order: 936, 705, 521, 278

B. Tick the correct answer.

- | | |
|---------------------|---------------------|
| 1. Ascending order | 2. Descending order |
| 3. Ascending order | 4. Ascending order |
| 5. Descending order | |

Exercise 2.7

A. Form two numbers each from these digits:

- | | | |
|-----------------------|-----------------------|-----------------------|
| 1. 4, 1 = 14, 41 | 2. 8, 2, 3 = 238, 832 | 3. 6, 5 = 56, 65 |
| 4. 5, 0, 7 = 507, 705 | 5. 7, 6, 9 = 679, 976 | 6. 4, 6, 8 = 468, 864 |

B. Choose the correct answer:

- | | | | |
|--------|--------|--------|--------|
| a. 390 | b. 522 | c. 651 | d. 909 |
|--------|--------|--------|--------|

Multiple Choice Questions:

- | | | |
|------------|-------------------------------|------------|
| 1. (a) 332 | 2. (a) 714, 715, 716 | 3. (a) 800 |
| 4. (a) 212 | 5. (b) Eight hundred eighteen | |

C. Write True or False

- | | | | |
|----------|---------|----------|---------|
| 1. True | 2. True | 3. False | 4. True |
| 5. False | 6. True | 7. True | |

D. Fill in the blank boxes

- | | | |
|-------------------|--------|-----------------------------|
| 1. 169. | 2. 2. | 3. Six hundred eighty-four. |
| 4. $900 + 10 + 7$ | 5. 800 | |

E. Tick the correct expanded form of the predecessor of 659.

- | | | |
|--------|--------|--------|
| 1. 658 | 2. 660 | 3. 661 |
|--------|--------|--------|

F. Find

- | | |
|-------------------------|---------------------------|
| 1. 1 more than 472: 473 | 2. 10 more than 830: 840 |
| 3. 1 less than 300: 299 | 4. 100 less than 406: 306 |

G. Colour the correct circle

- | | |
|----------------|----------------|
| 1. $572 < 758$ | 2. $293 < 298$ |
| 3. $645 > 635$ | 4. $854 = 854$ |

H. Observe and place the numbers in the correct boxes

- | | |
|----------------------------|----------------------------|
| 1. $395 > 184 > 127 > 92$ | 2. $121 < 209 < 436 < 651$ |
| 3. $703 > 265 > 248 > 108$ | 4. $174 < 518 < 636 < 899$ |

I. Arrange the digits to form the smallest and greatest number

- | |
|--|
| 1. 6, 9, 2 Greatest: 962 Smallest: 269 |
| 2. 5, 0, 1 Greatest: 510 Smallest: 105 |
| 3. 4, 7, 8 Greatest: 874 Smallest: 478 |

J. School Statistics Comparison

Abhishek's school: 715 girls, 894 boys

Saanvi's school: 950 girls, 825 boys

1. Who has more boys in their school? Abhishek ($894 > 825$)
2. Who has more girls in their school? Saanvi ($905 > 715$)
3. Who has less girls than boys in their school?
Abhishek (715 girls is less than 894 boys)

Exercise 2.8

A. Write the number names of the following.

1. 564: Five hundred sixty-four 2. 142: One hundred forty-two
3. 335: Three hundred thirty-five 4. 951: Nine hundred fifty-one
5. 675: Six hundred seventy-five

B. Write the numerals.

1. Four hundred fourteen: 414 2. Six hundred seventy-nine: 679
3. Nine hundred forty-eight: 948 4. Two hundred seventy-six: 276
5. Three hundred eighty: 380 6. One hundred ninety-six: 196

C. Fill in the blanks.

1. $600 + 50 + 9$ 2. 286 3. $700 + 80 + 0$
4. $500 + 6 + 0$ 5. 568 6. 529

D. Compare the numbers using the $>$, $<$ and $=$ sign.

1. $514 = 514$ 2. $786 > 736$ 3. $223 < 528$
4. $964 > 694$ 5. $847 > 764$ 6. $707 < 750$

E. State true or false.

1. True 2. False 3. False 4. True
5. False 6. True

F. Find the difference between the place value and face value of 2 in 324.

Place value of 2: 20 Face value of 2: 2 Difference: $20 - 2 = 18$

G. Find the sum of the place value of 5 in 245 and 257.

Place value of 5 in 245: 5 Place value of 5 in 257: 50

Sum: $50 + 5 = 55$



ADDITION

Let's Start

Student Count Totals

Section	Grade 2	Grade 3	Total
A	36	35	71 ($36 + 35 = 71$)
B	37	38	75 ($37 + 38 = 75$)
C	40	37	77 ($40 + 37 = 77$)

Exercise 3.1

1. $3 + 3 + 1 = 7$

2. $6 + 1 + 1 = 8$

3. $12 + 24 + 61 = 97$

4. $32 + 11 + 44 = 81$

Exercise 3.2**A. Fill in the boxes:**

1. 18 tens + 15 ones = 19 tens + 5 ones

2. 79 ones come before 8 tens.

3. 5 tens + 16 ones $>$ 6 tens + 5 ones ($<$, $=$ or $>$)

B. Add the following.

1. $47 + 28 = 75$

2. $68 + 23 = 91$

3. $35 + 59 = 94$

4. $67 + 26 = 93$

5. $79 + 12 = 91$

6. $34 + 29 = 63$

7. $58 + 27 = 85$

8. $76 + 18 = 94$

9. $48 + 26 = 74$

10. $38 + 39 = 77$

11. $46 + 47 = 93$

12. $69 + 14 = 83$

13. $19 + 43 = 62$

14. $28 + 38 = 63$

15. $37 + 35 = 72$

Exercise 3.3

1. $5 + 2 + 6 = 13$

2. $8 + 8 + 2 = 18$

3. $5 + 4 + 6 = 15$

Exercise 3.4

2. $24 + 15 + 18 = 57$

3. $30 + 17 + 12 = 59$

4. $48 + 21 + 17 = 86$

5. $23 + 14 + 31 = 68$

6. $35 + 27 + 02 = 64$

7. $74 + 13 + 03 = 90$

8. $51 + 07 + 20 = 78$

Exercise 3.5**A. Solve**

1. $532 + 66 = 598$

2. $852 + 27 = 879$

3. $614 + 11 = 625$

4. $124 + 16 = 586$

5. $570 + 16 = 586$

6. $231 + 325 = 556$

B. Add

1. $156 + 20 = 176$

2. $741 + 200 = 941$

3. $258 + 400 = 658$

4. $821 + 10 = 831$

5. $179 + 800 = 979$

6. $357 + 300 = 657$

Exercise 3.6**Add the following.**

1. $126 + 234 = 360$

2. $568 + 309 = 877$

3. $265 + 37 = 302$

4. $456 + 379 = 835$

5. $375 + 156 = 531$

6. $258 + 147 = 405$

7. $487 + 147 = 634$

8. $624 + 256 = 880$

9. $487 + 237 = 724$

10. $746 + 164 = 910$

11. $763 + 157 = 920$

12. $145 + 185 = 330$

13. $532 + 064 = 596$

14. $823 + 165 = 988$

15. $135 + 744 = 879$

Exercise 3.7**Choose the correct answer.**

1. (c) 73 tens

2. (b) 9, 0

3. (b) $147 + 479$

4. a (ii) 503 (b) (i) 996

Exercise 3.8

A. Solve the following.

1. 37

2. 87

3. 89

4. 45

5. 77

6. 89

B. Add and check your answers with your partner.

1. $2 + 3 + 3 = 8$

2. $2 + 8 + 5 = 15$

3. $3 + 4 + 5 = 12$

4. $3 + 3 + 3 = 9$

5. $4 + 2 + 6 = 12$

C. Add:

1. 86

2. 49

3. 39

4. 86

5. 69

6. 88

D. Add the following.

1. 408

2. 198

3. 229

E. Add the following numbers.

1. 665

2. 491

3. 482

4. 382

Mental Maths

$458 + 254 = 715$

$712 + 123 = 835$

$803 + 187 = 990$

$579 + 345 = 924$

$369 + 241 = 610$

$249 + 179 = 428$

$564 + 416 = 980$

$637 + 187 = 824$



SUBTRACTION

Let's Start

Count the number of steps that her mother needs to take to reach Khushboo.

Her mother is at 11 and Khushboo is at 4.

Answer: 7 steps

How many steps does Khushboo have to take to reach to 0? Answer: 4 steps

Exercise 4.1

A. Fill in the blanks:

1. 5 tens + 2 ones = 4 tens + 12 ones.

2. 2 tens + 0 ones = 1 ten + 10 ones.

3. 4 tens + 8 ones = 3 tens + 18 ones.

B. Count backward on the number line and subtract.

2. $62 - 8 = 54$

3. $17 - 7 = 10$

C. Subtract.

1. $44 - 4 = 40$

2. $39 - 8 = 31$

3. $27 - 6 = 21$

4. $58 - 5 = 53$

5. $72 - 1 = 71$

6. $19 - 9 = 10$

Exercise 4.2

A. Circle the correct answer.

1. $27 - 0 = 27$

2. $39 - 1 = 38$

3. $19 - 0 = 19$

4. $27 - 27 = 0$

B. Fill in the blanks.

1. $32 - 0 = 32$

2. $54 - 0 = 54$

3. $65 - 65 = 0$

4. $32 - 1 = 31$

Exercise 4.3

1. $38 - 4 = 34$

2. $57 - 5 = 52$

3. $66 - 23 = 43$

4. $52 - 11 = 41$

Exercise 4.4

A. 1. $51 - 29 = 22$

2. $85 - 48 = 37$

3. $63 - 57 = 06$

4. $90 - 88 = 02$

B. $96 - 59 = 37$

C. 1. $36 - 28 = 08$

2. $42 - 19 = 3$

3. $83 - 37 = 46$

4. $57 - 49 = 08$

5. $61 - 27 = 34$

6. $24 - 18 = 06$

D. 1. $27 - 19 = 8$

2. $53 - 25 = 28$

3. $30 - 18 = 28$

4. $66 - 39 = 27$

5. $56 \times 38 = 2128$

6. $75 - 46 = 29$

Exercise 4.5 1. Hearts (6 Pink, 5 Yellow)

A. 1. $6 + 5 = 11$

$5 + 6 = 11$

$11 - 5 = 6$

$11 - 6 = 5$

2. $9 + 6 = 15$

$9 + 6 = 15$

$15 - 9 = 6$

$15 - 6 = 9$

B. Subtract and check the answer.

1. $92 - 45 = 47$

Check: $45 + 47 = 92$

2. $56 - 19 = 37$

Check: $19 + 37 = 56$

3. $80 - 31 = 49$

Check: $31 + 49 = 80$

4. $76 - 63 = 13$

Check: $63 + 13 = 76$

5. $49 - 29 = 20$

Check: $29 + 20 = 49$

6. $62 - 52 = 10$

Check: $52 + 10 = 62$

Exercise 4.6

1. $435 - 120 = 315$

2. $382 - 162 = 220$

3. $575 - 61 = 514$

4. $348 - 35 = 313$

5. $402 - 100 = 302$

Exercise 4.7

A. Subtract the following:

1. $384 - 159 = 225$

2. $587 - 238 = 349$

3. $882 - 375 = 507$

4. $584 - 457 = 127$

B. Word Problems:

1. $364 - 187 = 177$

177 candies are left

2. $126 - 37 = 89$

89 mangoes are good

Exercise 4.8

1. $522 + 364 = 158$

2. $601 - 235 = 366$

3. $356 - 269 = 087$

Exercise 4.9

1. $400 - 265 = 135$

2. $300 - 58 = 442$

3. $800 - 119 = 681$

Exercise 4.10

1. $51 - 27 = 24$

2. $76 - 37 = 39$

3. $659 - 245 = 414$

Exercise 4.11**A. Subtract mentally**

1. $25 - 3 = 22$

2. $88 - 3 = 85$

3. $78 - 6 = 72$

4. $65 - 4 = 61$

B. Determine the missing digits

1. $96 - 72 = 24 \rightarrow$ Missing digits: 9 and 4

2. $98 - 26 = 72 \rightarrow$ Missing digit: 2

3. $886 - 734 = 152 \rightarrow$ Missing digits: 8 and 4

4. $947 - 612 = 335 \rightarrow$ Missing digits: 9 and 2

C. Subtract the following

1. $854 - 545 = 309$

2. $577 - 338 = 239$

3. $533 - 246 = 287$

4. $674 - 236 = 438$

5. $444 - 276 = 168$

6. $752 - 366 = 386$

7. $666 - 278 = 388$

8. $557 - 268 = 289$

9. $313 - 135 = 178$

10. $555 - 266 = 289$

11. $555 - 266 = 289$

12. $397 - 188 = 209$

D. Circle the right answer

1. $600 - 125 = 475$

2. $999 - 880 = 119$

3. $290 - 89 = 201$

4. $119 - 114 = 5$

Exercise 4.12 (MCQ)

1. (b) 18

2. (a) 91

3. (c) 67

4. (c) 70

5. (b) 29

B. Read carefully and answer

1. $45 - 23 = 22$

2. $17 - 9 = 8$

3. $32 - 12 = 20$

4. $56 - 8 = 48$

5. $20 - 12 = 8$

6. $75 - 28 = 47$

Let's Revise**A. Subtract**

1. $96 - 22 = 74$

2. $45 - 11 = 34$

3. $68 - 33 = 35$

4. $34 - 12 = 22$

5. $49 - 16 = 33$

6. $85 - 13 = 72$

B. Fill in the symbol

1. $35 - 12 = 23$

2. $47 + 13 = 60$

3. $88 - 22 = 66$

C. Fill in the blank boxes

1. Row 1: $19 - 4 = 15$

2. Column 1: $19 - 1 = 18$

3. Row 3: $1 - 1 = 0$

4. Column 3: $4 - 1 = 3$

5. Last row: $18 - 3 = 15$

Filled numbers: 15, 18, 1, 1, 18**D. Subtract and locate range**

$39 - 14 = 25 \rightarrow (20-30)$

$66 - 33 = 33 \rightarrow (30-40)$

$98 - 50 = 48 \rightarrow (40-50)$

$57 - 12 = 45 \rightarrow (40-50)$

$65 - 14 = 51 \rightarrow (50-60)$

E. Difference

$50 - 25 = 25$

$40 - 15 = 25$

$30 - 5 = 25$

$49 - 24 = 25$

F. Subtract

$1. 64 - 55 = 9$

$2. 55 - 47 = 8$

$3. 74 - 56 = 18$

$4. 52 - 17 = 35$



MULTIPLICATION

Let's Start

How many strawberries of strawberries are there? $5 \times 3 = 15$

How many strawberries are there in each group?

There are 3 strawberries in each group.

How many strawberries are there altogether?

Let's Do

Counting in Fives - 5 Times Table

5 10 15 20 25 30 35 40 45 50

Let's Do

A. Look at the froggy's jumps and fill in the boxes. $6 \times 10 = 60$

B. Complete the multiplication table of 10.

10 20 30 40 50 60 70 80 90 100

Let's Do (True or False)

1. True

2. False

3. False

4. False

Let's Do

Fill in the empty boxes to show multiplication on the number line.

1. 3 times 5 or $3 \times 5 = 15$

2. 2 times or $5 \times 2 = 10$

Let's Do

Determine the product

$1. 4 \times 4 = 16$

$2. 6 \times 7 = 42$

$3. 5 \times 2 = 10$

MCQ

$1. (c) 4 \times 2$

$2. (a) 7 \times 5$

Let's Revise A

Groups: 2

Pigeons in each group: 4

Total pigeons: 6

Repeated addition: $3 + 3 = 6$

Multiplication: $2 \times 3 = 6$

B. Pictures

1. Shoes:

$2 + 2 + 2 = 6$

3 groups of 2 = 6

$3 \times 2 = 6$

2. Cupcakes:

$5 + 5 = 10$

2 groups of 5

$2 \times 5 = 10$

C. Count $3 \times 3 = 9$

D. Multiplication facts

1. $3 \times 2 = 6$

2. $2 \times 3 = 6$

3. $4 \times 3 = 12$

E. Correct the wrong ones

1. Correct

2. Wrong

3. Wrong

4. Correct

F. Fingers Hands → Fingers

$1 \rightarrow 5$

$2 \rightarrow 10$

$3 \rightarrow 15$

$4 \rightarrow 20$

$5 \rightarrow 25$

$6 \rightarrow 30$

$7 \rightarrow 35$

$8 \rightarrow 40$

$9 \rightarrow 45$

$10 \rightarrow 50$



DIVISION

Let's Do

A. Divide the apples into equal groups.

Count the apples: There are 12 apples in total.

Divide by the number of boxes: There are 2 boxes shown.

Calculation: $12 / 2 = 6$ Answer: Each box has 6 apples.

B. How many bananas in each basket?

Count the bananas: There are 12 bananas in total (4 groups of 3).

Divide by the number of baskets: There are 4 baskets shown.

Calculation: $12 / 4 = 3$ Answer: Each basket has 3 bananas.

Let's Do (Division)

1. Each group has 4 ice-creams.

16 divided by 4 equals 4.

2. Each group has 2 apples.

20 divided by 10 equals 2.

Let's Do (Division)

A. Divide 9 circles into 3 equal groups.

To find the number of circles in each group, we divide the total by the number of groups: $9 / 3 = 3$

Group 1: 3 circles (● ● ●)

Group 2: 3 circles (● ● ●)

Group 3: 3 circles (● ● ●)

B. Divide 16 stars into 4 equal groups.

To find the number of stars in each group, we divide the total by the number of groups: $16 / 4 = 4$

Group 1: 4 stars

Group 2: 4 stars

Group 3: 4 stars

Group 4: 4 stars

Let's Revise

1. Sandwiches among Children

To divide 20 sandwiches equally among 10 children, you group them so each child gets the same amount.

Total sandwiches: 20

Total children: 10

Equation: $20 / 10 = 2$



SHAPES AND LINES

Let's Start

A: The Torans

Which shape is formed? Triangle

Draw the shape: (Draw a three-sided closed figure:)

How many sides does it have? 3

How many corners does it have? 3

Section B: The Door

What is the shape of the door? Rectangle

How many sides does it have? 4

How many corners does it have? 4

Section B: The Door

What is the shape of the door? Rectangle

How many sides does it have? 4

How many corners does it have? 4

Section C: The Clock

What is the shape of this clock? Circle

Draw the shape of the clock: (Draw a round, curved figure:)

Exercise 7.1

1. Cuboid (or Rectangular Prism) — The cupboard has rectangular faces.
2. Cylinder — The soda can has a circular base and top with a curved surface.
3. Cube — The ice cube has equal square faces.
4. Sphere — The globe is perfectly round like a ball.
5. Cone — The party hat has a circular base tapering to a single point.
6. Cylinder — The mug, like the can, follows a cylindrical 3D structure.

Exercise 7.2

A. Identify Straight (S) or Curved (C) Lines From left to right:

1. C (Semi-circle)
2. S (Slanted line)
3. C (Wavy line)
4. S (Vertical line)
5. C (U-shaped curve)

B. Count the Lines in Each Figure

- | | | |
|----------------------|--------------------|-----------------|
| 1. Envelope/Postcard | Straight lines: 11 | Curved lines: 0 |
| 2. Parachute | Straight lines: 6 | Curved lines: 4 |
| 3. Hexagon | Straight lines: 6 | Curved lines: 0 |

Exercise 7.3

1. T: 1 sleeping line (top) and 1 standing line.
2. I: 1 standing line.
3. N: 2 standing lines and 1 slanting line.
4. A: 2 slanting lines and 1 sleeping line.

Exercise 7.4

A. Roll (R), Slide (S), or Both (B)

- | | | |
|--------------|-----------------|--------------|
| 1. Ball: R | 2. Sharpener: S | 3. Eraser: S |
| 4. Pencil: B | 5. Book: S | 6. Dice: S |

B. Shape Recognition

The water tank image resembles a Cylinder.

C. Tick the correct answer.

- | | | |
|----------------|---------------|-------------------|
| a. (ii) circle | b. (i) square | c. (iii) triangle |
|----------------|---------------|-------------------|

E. Count the lines. Based on the robot-star figure:

Sleeping Lines (Horizontal) : 7	Standing Lines (Vertical) : 6
Slanting Lines (Diagonal) : 10	

F. Identify the solid shapes

- | | | |
|-------------|-----------|---------|
| 1. Cylinder | 2. Cuboid | 3. Cone |
|-------------|-----------|---------|

G. Count the lines

The letter E	Horizontal lines: 3	Vertical lines: 1
The number 7	Horizontal lines: 1	Slanting lines: 1
The letter R	Curved lines: 1	Slanting lines: 1 Vertical lines: 1



TIME

Special Days

Gandhi Jayanti is celebrated on October 2

Children's Day in India is celebrated on November 14.

Exercise 8.1 Section A: Days of the Weeks

1. New Year 1st January: Wednesday
2. Republic day 26th January: Sunday
3. Gandhi Jayanti 2nd October: Thursday
4. Children's day 14th November: Friday
5. Independence day 15th August: Friday

Section B: Multiple Choice

1. The first working day of the week is Monday.
2. The third working day of the week is Wednesday.
3. The sixth working day of the week is Saturday.
4. The last day of the week is Sunday.

C. Tick (✓) the correct time.

1. (a) 7:45 2. (b) 3. (c) 7:30 4. (d) 9:00

MCQ

1. (d) 6:29 2. (b) August 3. (a) January 4. (a) October

Let's Revise

A. Which of the following sequences of the months in a year is not correct?

1. Correct 2. Correct 3. Not correct 4. Correct

B. Ritesh wrote the time on this clock in two ways: 9:30 and Half past 9. Check whether he is correct.

No, he is incorrect. The hour hand is at 6 and the minute hand is at 9.

The correct time is: 5:45 or Quarter to 6.



MONEY

Let's Do (Coin Identification)

- | | | |
|-----------------------------------|----------------|----------------|
| 1 - rupee coin (Already provided) | 2 - rupee coin | 5 - rupee coin |
| 10 - rupee coin | 5 rupee note | 10 rupee note |
| 20 rupee note | 50 rupee note | 100 rupee note |
| 200 rupee note | 500 rupee note | |

Counting Money

Exercise 1: Skip counting by 5 (₹5 coins) The sequence is: Total: ₹25

Exercise 2: Skip counting by 10 (₹10 notes) The sequence is: Total: ₹50

Exercise 3: 15 + ₹5 (Coin) 20 20 + ₹2 (Coin) 22 Total = ₹22

Let's Do (count each row step by step:)

1. $7 \times 5 = ₹35$ 2. $5 + 2 + 2 + 2 = ₹11$ 3. $10 + 10 + 5 + 1 = ₹26$
4. $10 + 10 + 5 + 2 + 1 = ₹28$

Let's Do

1. Pizza = ₹75, Cherries = ₹20 $75 + 20 = ₹95$
2. Crayons = ₹37, Cube = ₹26 $37 + 26 = ₹63$

B. Calculate

1. $₹15 + ₹25 = ₹40$ 2. $₹60 + ₹35 = ₹95$
3. $₹20 + ₹40 = ₹60$ 4. $₹90 - ₹55 = ₹35$

MCQ

1. (b) (two ₹5 notes) 2. (a) 2 3. (d) 5 4. (a) ₹60

Let's Revise

A. Match the following

- 1 → ii (₹10 → Ice cream) 2 → iii (₹20 → Pencil box)
3 → i (₹50 → Ball)

B. Circle the coins

- | | | |
|--------------|---------------------------|-----------------|
| 1. ₹20 note | $₹5 + ₹5 + ₹5 + ₹5 = ₹20$ | Circle 4 coins |
| 2. ₹50 note | $₹10 \times 5 = ₹50$ | Circle 5 coins |
| 3. ₹10 note | $₹2 \times 5 = ₹10$ | Circle 5 coins |
| 4. ₹100 note | $₹10 \times 10 = ₹100$ | Circle 10 coins |

C. Fill in the empty boxes

- | | |
|----------------------|----------------------|
| 1. $60p + 35p = 95p$ | 2. $85p - 40p = 45p$ |
| 3. $₹69 + ₹20 = ₹89$ | 4. $₹55 - ₹35 = ₹20$ |

D. Write the price on the tag

- | | |
|---------------------------|-------------------------|
| 1. $₹5 + ₹2 = ₹7$ | 2. $₹5 + ₹5 + ₹2 = ₹12$ |
| 3. $₹10 + ₹10 + ₹5 = ₹25$ | |

E. Add or subtract

- | | | |
|-----------------------|----------------------|----------------------|
| 1. $₹80 + ₹25 = ₹105$ | 2. $₹35 + ₹58 = ₹93$ | 3. $₹50 - ₹13 = ₹37$ |
|-----------------------|----------------------|----------------------|



METRIC MEASUREMENT

Let's Start

- The tallest bear → Daddy Bear
- The longest bed → The bed on the right
- The smallest bowl → The bowl on the right
- The shortest chair → The chair on the right

Exercise 8.1

- | | | | | | |
|-------|-------|------|------|------|-------|
| 1. cm | 2. cm | 3. m | 4. m | 5. m | 6. cm |
|-------|-------|------|------|------|-------|

Exercise 10.2

- | | |
|-----------------------------|-----------------------------------|
| 1. The puppy weighs 6 kg. | 2. The pair of shoes weighs 1 kg. |
| 3. The pumpkin weighs 5 kg. | 4. The water melon weighs 4 kg. |

Which object is the heaviest? The puppy (6 kg).

Which object is the lightest? The pair of shoes (1 kg).

Exercise 10.3

- | | |
|-------------------------|------------|
| 1. Orange Juice Cartons | 1 L carton |
| 2. Water Bottles | 2 L carton |

C Complete the Blanks

- | | |
|-----------------------------|--|
| 1. Jug = 5 Glasses of milk | 2. Petrol Tank = 10 Cans |
| Capacity of jug = 5 glasses | 12 cans can completely fill 1 petrol tank. |
| | 2 petrol tanks can be filled by 24 cans. |

D Units of Measurement

- | | | |
|------------|------------------|-----------------|
| 1. Ring: g | 2. Rice Sack: kg | 3. Soda Can: mL |
| 4. Rope: m | 5. Car: kg | 6. Orange: g |

Let's Revise

- A.** 1. The crayon is 3 erasers long. 2. The crayon is 6 sharpeners long.
3. The book is 4 erasers long. 4. The book is 8 sharpeners long.
- B.** 1. Yes 2. The length of this toy car is 4 cm.
3. An ant is lighter than a tortoise.
4. The weight of the book is equal to 5 marbles.
5. The weight of four oranges is more than the papaya

C: Units of Measurement

- | | |
|---------------------------|----------------------------|
| 1. A pack of rice: kg | 2. A bucket of water: l |
| 3. Length of the room: m | 4. A packet of biscuits: g |
| 5. Length of a pencil: cm | 6. A glass of milk: ml |

D: Length Measurements:

- | | |
|--|----------------------------------|
| 1. Your maths book is 25 - 30 cm long. | 2. Your comb is 15 - 20 cm long. |
| 3. Length of a spoon is 12 - 15 cm long. | 4. A chalk is 6 - 8 cm long. |

E: Reading Volume/Capacity

- | | | |
|-----------|---------|-----------|
| 1. 150 ml | 2. 7 ml | 3. 800 ml |
|-----------|---------|-----------|



REPRESENTING DATA

Exercise 11.1.

A. Number of Flowers Table

Flowers	Numbers
Roses (Red)	9
Sunflowers (Yellow with dark center)	5
Marigolds (Orange/Yellow)	9
Hibiscus (Bright red with petals spread)	5



MODEL TEST PAPER

A. Choose the correct option.

- | | | |
|----------|------------|-----------|
| 1. (b) 4 | 2. (c) 240 | 3. (a) 59 |
|----------|------------|-----------|

B. Number Sequences

Next four even numbers: 98, 100, 102, 104, 106, 108.

Next four odd numbers: 311, 313, 315, 317, 319, 321.

C. 1. $136 > 133$ 2. $241 < 340$ 3. $246 > 243$ 4. $441 > 430$

D. Fill in the blank boxes.

1. $17 + 7 = 24$

2. $22 - 6 = 16$

3. $28 + 12 = 40$

4. $7 \times 9 = 63$

5. $56 \div 7 = 8$

6. $49 \div 7 = 7$

E. Solve the following.

(a) $24 \div 3 = 8$ Dividend: 24

Divisor: 3

Quotient: 8

(b) $30 \div 5 = 6$ Dividend: 30

Divisor: 5

Quotient: 6

F. $734 + 253 = 987$ beads

G. $485 - 84 = 401$ hens left

H. $180 + 310 = 490$ packets



LARGE NUMBER

TASK -1

1. Fill in the missing numbers.

- a. 1213 1214 1215 1216 1217 1218 1219 1220
- b. 4509 4510 4511 4512 4513 4514 4515 4516
- c. 6865 6866 6867 6868 6869 6870 6871 6872 6873
6874
- d. 2101 2102 2103 2104 2105 2106 2107 2108 2109
2110

2. Write the number:

- a. Four thousand seven hundred : 4,700
- b. Seven thousand three hundred one : 7,301
- c. Eight thousand one hundred forty : 8,140
- d. Six thousand four hundred seventy-nine : 6,479
- e. Seven thousand three hundred sixty-five : 7,365
- f. Nine thousand nine hundred ninety-nine : 9,999

3. Write the number names:

- a. 3015 : Three thousand fifteen
- b. 8331 : Eight thousand three hundred thirty-one
- c. 7800 : Seven thousand eight hundred
- d. 210 : Two hundred ten
- e. 3583 : Three thousand five hundred eighty-three
- f. 7208 : Seven thousand two hundred eight
- g. 9999 : Nine thousand nine hundred ninety-nine.

4. Starting at 1,500, skip-count by 100:

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1,500 | 1,600 | 1,700 | 1,800 | 1,900 | 2,000 |
| 2,100 | 2,200 | 2,300 | 2,400 | 2,500 | 2,600 |
| 2,700 | 2,800 | 2,900 | 3,000 | 3,100 | 3,200 |
| 3,300 | 3,400 | 3,500 | 3,600 | 3,700 | 3,800 |
| 3,900 | 4,000 | 4,100 | 4,200 | 4,300 | 4,400 |
| 4,500 | 4,600 | 4,700 | 4,800 | 4,900 | 5,000 |
| 5,100 | 5,200 | 5,300 | 5,400 | 5,500 | 5,600 |
| 5,700 | 5,800 | 5,900 | 6,000 | 6,100 | 6,200 |

Let's Do 1.1

Represent any numbers given in hexagons using open abacus.

1. Number: 6579 Abacus Representation:
Th H: T: O:
6 beads 5 beads 7 beads 9 beads
Number Name: Six thousand five hundred and seventy-nine.
2. Number: 7391 Abacus Representation:
Th H: T: O:
7 beads 3 beads 9 beads 1 bead
Number Name: Seven thousand three hundred and ninety-one.
3. Number: 9459 Abacus Representation:
Th H: T: O:
9 beads 4 beads 5 beads 9 beads
Number Name: Nine thousand four hundred and fifty-nine.
4. Number: 3012 Abacus Representation:
Th H: T: O:
3 beads 0 beads 1 bead 2 beads
Number Name: Three thousand and twelve.

Task - 2

Fill in the chart below to show ow many Thousands, Hundreds, Tens and Ones. The first one has been done for you.

1. 5342: $5000 + 300 + 40 + 2$ (Example)
2. 8092: $8000 + 000 + 90 + 2$
3. 1729: $1000 + 700 + 20 + 9$
4. 6174: $6000 + 100 + 70 + 4$
5. 1010: $1000 + 000 + 10 + 0$

Task - 3

1. Complete the given table

Standard form	Expanded form	In Words
a. 6509	$6000 + 500 + 00 + 9$	Six thousand five hundred nine
b. 7085	$7000 + 000 + 80 + 5$	Seven thousand eighty-five
c. 3006	$3000 + 000 + 00 + 6$	Three thousand six
d. 5432	$5000 + 400 + 30 + 2$	Five thousand four hundred thirty-two
e. 2110	$2000 + 100 + 10 + 0$	Two thousand one hundred ten

2. Write the standard form for the following

- a. 1893 b. 2976 c. 3302 d. 7747 e. 5242
f. 9999

3. Find the missing place value from the 4-digit numbers given below.

- a. $1 + 4000 + 900 + 10 = 4911$
- b. $0 + 50 + 1000 + 4 = 1054$
- c. $400 + 60 + 1000 + 4 = 1464$
- d. $5 + 70 + 900 + 1000 = 1975$
- e. $8000 + 400 + 60 + 6 = 8466$
- f. $0 + 7 + 200 + 4000 = 4207$

Let's Do 1.2

1. Write in words :

- (a) 9,846 : Nine thousand, eight hundred forty-six
- (b) 4,752 : Four thousand, seven hundred fifty-two
- (c) 54,215 : Fifty-four thousand, two hundred fifteen
- (d) 60,347 : Sixty thousand, three hundred forty-seven
- (e) 4,572 : Four thousand, five hundred seventy-two
- (f) 30,007 : Thirty thousand, seven

2. Write in numerals:

- (a) Four thousand five hundred and sixty-two : 4,562
- (b) Six thousand six hundred and seventy-seven : 6,677
- (c) Thirty-eight thousand two hundred and forty-one : 38,241
- (d) Ninety thousand one hundred and fifteen : 90,115

3. Write the face value and place value of the underlined digits in the following numbers:

Number	Underlined Digit	Face Value	Place Value
(a) 7091	9	9	90 (Tens)
(b) 349	3	3	300 (Hundreds)
(c) 63,456	3	3	3,000(Thousands)
(d) 87,240	4	4	40 (Tens)

4. Write in Expanded Form

- (a) $91,405 = 90,000 + 1000 + 400 + 0 + 5$
- (b) $87,515 = 80,000 + 7000 + 500 + 10 + 5$
- (c) $98,241 = 90,000 + 8000 + 200 + 40 + 1$

5. Write in Short Form

- (a) $7,000 + 400 + 40 + 4 = 7,444$
- (b) $30,000 + 7,000 + 600 + 50 + 4 = 37,654$
- (c) $90,000 + 9,000 + 900 + 90 + 9 = 99,999$

6. Make the smallest and largest possible numbers using the following digits.

Digits	Smallest Number	Largest Number
(a) 7, 5, 6,	22,567	7,652
(b) 7, 8, 0, 3	3,078	8,730
(c) 2, 3, 5, 0	2,035	5,320
(d) 2, 7, 6, 8	2,678	8,762
(e) 7, 0, 9, 8	7,089	9,870
(f) 9, 3, 2, 5	2,359	9,532
(g) 1, 7, 0, 2	1,027	7,210
(h) 3, 0, 0, 2	2,003	3,200

7. Write the successor and predecessor of the following:

Predecessor	Number	Successor
(a) 2492	2493	2494
(b) 7859	7860	7861
(c) 8142	8143	8144
(d) 9251	9252	9253

Let's Do 1.3

1. Fill in the symbol $>$, $<$ or $=$:

- (a) $90091 > 99001$ (b) $89999 > 8998$
(c) $45123 < 45320$ (d) $3223 < 3232$

2. Arrange the following numbers as directed :

- (a) 29804, 28175, 25472, 26489
Ascending order : 25472, 26489, 28175, 29804
(b) 4645, 7893, 2910, 6457
Descending order : 7893, 6457, 4645, 2910
(c) 7215, 7327, 5689, 4218
Descending order : 7327, 7215, 5689, 4218
(d) 9378, 1029, 4576, 6354
Ascending order : 1029, 4576, 6354, 9378
(e) 8369, 6983, 3698, 8693
Ascending order : 3698, 6983, 8369, 8693

Let's Do 1.4

1. Write the Roman numerals for each of the following numbers.

- (a) $16 = XVI$ (b) $25 = XXV$ (c) $39 = XXXIX$ (d) $27 = XXVII$

2. Write the Hindu-Arabic numerals for each of the following.

- (a) $XVIII = 18$ (b) $XXIV = 24$ (c) $XXXVII = 37$ (d) $XXXIV = 34$

3. Fill in the blanks:

- (a) The Roman numeral for 26 is XXVI.

- (b) The successor of XXX is 30.
 (c) The predecessor of 20 in Roman numeral is XIX (19).
 (d) The greatest 1-digit number (9) in Roman numeral is IX.
 (e) When we add V (5) to X (10) and then subtract I (1) from the number, we get XIV (14).

Let's Revise

1. The greatest three-digit number is 999.
2. The smallest three-digit number is 100.
3. The greatest four-digit number is 9999.
4. 1000 is the smallest four-digit number.
5. 99999 is the greatest five-digit number.
6. 10000 is the smallest five-digit number.
7. By adding 1 to the greatest four-digit number, we get the smallest five-digit number.
8. 1 thousand = 10 hundreds.
9. 1 hundred = 10 tens.
10. Place value = Face value Value of the place.
11. Place value of 5 in 3560 is 500.
12. The number having 3 in the hundreds place, 5 in the ones place, and 2 in the tens place is 325.
13. 4789 is greater than 874.
14. 976 is smaller (or less) than 3678.
15. 465 is equal to 465.

MCQ

1. (a) 548, 2. (c) 9643, 3. (a) 4192



ADDITION

TASK -1 1. Add:

- (a) 841, (b) 788, (c) 755, (d) 765, (e) 565
 (f) 999

2. Slove :

- (a) 252, (b) 407, (c) 1030, (d) 490, (e) 1051
 (f) 1110, (g) 668, (h) 1314, (i) 1665

Task- 2

1. Find the missing digits of the following additions:

1. $3824 + 1492 = 5316$ 2. $2018 + 2017 = 4035$ 3. $1214 + 2453 = 3667$
 4. $7129 + 1729 = 8858$ 5. $1432 + 4132 = 5564$ 6. $3789 + 4873 = 8662$

Let's Do 2.1

1. Do the following:

- (a) 2231 (b) 9245 (c) 8133 (d) 5368
 (e) 8751 (f) 89426

2. Write in columns and find the sum:

- (a) 6039, (b) 2418 (c) 5416, (d) 10256, (e) 12183,
 (f) 15276

3. Fill in the blanks:

- (a) $2374 + 0 = 2374$ (b) $0 + 6472 = 6472$ (c) $7431 + 1 = 7432$
 (d) $1 + 6879 = 6880$ (e) $2467 + 7231 = 7231 + 2467$

Task -3

1. Estimate the addends by rounding off the nearest 10s.

- (a) $25 \rightarrow 30$, $32 \rightarrow 30$ $30 + 30 = 60$
 (b) $79 \rightarrow 80$, $12 \rightarrow 10$ $80 + 10 = 90$
 (c) $45 \rightarrow 50$, $55 \rightarrow 60$ $50 + 60 = 110$
 (d) $27 \rightarrow 30$, $83 \rightarrow 80$ $30 + 80 = 110$
 (e) $264 \rightarrow 260$, $145 \rightarrow 150$ $260 + 150 = 410$
 (f) $129 \rightarrow 130$, $31 \rightarrow 30$ $130 + 30 = 160$

2. Estimate the addends by rounding to the nearest 100s

- (a) $852 \rightarrow 900$, $125 \rightarrow 100$ $900 + 100 = 1000$
 (b) $763 \rightarrow 800$, $410 \rightarrow 400$ $800 + 400 = 1200$
 (c) $385 \rightarrow 400$, $741 \rightarrow 700$ $400 + 700 = 1100$
 (d) $523 \rightarrow 500$, $521 \rightarrow 500$ $500 + 500 = 1000$
 (e) $201 \rightarrow 200$, $521 \rightarrow 500$ $200 + 500 = 700$
 (f) $637 \rightarrow 600$, $125 \rightarrow 100$ $600 + 100 = 700$

Let's Do 2.3

1. Newspaper Sales Newspapers supplied: 3456
 Magazines supplied: + 2345
 Total items (if intended): 5801 newspaper
2. Distance from Building A to C Distance A to B: 267 m
 Distance B to C: + 367 m
 Total distance (A to C): 634m
3. Distance from Market to House House to Temple: 943 m
 Temple to Market: + 258 m
 Total distance (Market to House): 1201m

4. 4. Total Number of Bags of Grains

Wheat bags: 709

Pulses bags: 685

Rice bags: + 336

Total bags: 1730 bags

5. Total Trees in the Garden

Palm trees: 365

Mango trees: 582

Guava trees: 549

(a) Palm and Mango trees: $365 + 582 = 947$ trees

(b) Palm and Guava trees: $365 + 549 = 914$ trees

(c) Mango and Guava trees: $582 + 549 = 1131$ trees

Let's Revise

1. The process of finding the total value is called addition.
2. The numbers that we add are known as addends.
3. By adding 0 to any number, we get the same number.
4. By adding 1 to any number, we get the next number or the successor.
5. The result in addition is called sum or total.
6. $368 + 0 = 368$
7. $349 + 0 = 349$
8. $439 + 1 = 440$
9. Addition starts from ones place onwards.
10. Addend + Addend = Sum.
11. $5000 + 5000 = 10000$
12. $8800 + 1200 = 10000$

MCQ

1. (a) $A = 3$, $B = 4$ $C = 5$ 2. (b) 710 3. (c)



SUBTRACTION

Task -1

1. $926 - 891$, $926 - 800 = 126$, $126 - 90 = 36$, $36 - 1 = 35$, Answer: 35
2. $549 - 323$, $549 - 300 = 249$, $249 - 20 = 229$, $229 - 3 = 226$ Answer: 226
3. $756 - 238$, $756 - 200 = 556$, $556 - 30 = 526$, $526 - 8 = 518$ Answer: 518
4. $813 - 512$, $813 - 500 = 313$, $313 - 10 = 303$, $303 - 2 = 301$ Answer: 301

Task -2 1. Find the difference

(a) $2226 - 1124 = 1102$

(b) $5605 - 2304 = 3301$

(c) $2362 - 1120 = 1242$

(d) $5625 - 4213 = 1412$

$(e) 3374 - 1152 = 2222$

$(f) 7854 - 4660 = 3194$

$(g) 3458 - 2117 = 1341$

$(h) 4894 - 2432 = 2462$

2. Write in columns and find the difference

$(a) 6634 - 3539 = 3095$

$(b) 6204 - 4328 = 1876$

$(c) 7750 - 1368 = 6382$

$(d) 8753 - 5888 = 2865$

$(e) 9786 - 1772 = 8014$

$(f) 9855 - 7988 = 1867$

Task - 3

$1. 2961 - 1730 = 1231$

$2. 5347 - 3205 = 2142$

$3. 6799 - 2230 = 4569$

$4. 3999 - 1385 = 2614$

$5. 5995 - 1253 = 4742$

$6. 7697 - 5481 = 2216$

Let's Do 2.3

1. Find the difference of the following :

$(a) 899 - 346 = 553$

$(b) 573 - 127 = 452$

$(c) 6132 - 2260 = 3872$

2. Arrange in columns and then find the following differences:

$(a) 7895 - 5103 = 2792$

$(b) 4258 - 2145 = 2113$

$(c) 6974 - 1223 = 5751$

$(d) 8675 - 1234 = 7441$

3. Do the following :

$(a) 7973 - 5920 = 2053$

$(b) 3115 - 2442 = 673$

$(c) 7020 - 1727 = 5293$

$(d) 9371 - 6320 = 3051$

$(e) 5216 - 4525 = 691$

$(f) 7710 - 2223 = 5487$

4. Fill in the blanks:

$(a) 8974 - 0 = 8974$

$(b) 7473 - 6473 = 1000$

$(c) 1433 - 1000 = 433$

$(d) 10000 - 6877 = 3123$

Let's Do 3.2:

1. How many more students study in Ryan International school?

Students in Ryan International school: 3250

Students in Silver Bells school: 1752

Difference: $3250 - 1752 = 1498$

Answer: There are 1498 more students in Ryan International school.

2. How many mangoes are left on the tree?

Total mangoes on the tree: 318

Mangoes that fell: 128

Difference: $318 - 128 = 190$

Answer: There are 190 mangoes left on the tree.

3. Batsman Runs Comparison

Batsman A runs: 6,342

Batsman B runs: 5,982

Calculation: $6342 - 5982 = 360$

Answer: Batsman A scored 360 more runs than Batsman B.

4: Finding the Number of Girls

Total children: 4863 Number of boys: 1132

Calculation: $4863 - 1132 = 3731$

Answer: There are 3,731 girls.

5: Finding the Missing Number

Sum of two numbers: 8295 One number: 1729

Calculation: $8295 - 1729 = 6566$

Answer: The other number is 6,566.

6: Calculating Savings

Earnings: ₹19,000 Spending: ₹12,096

Calculation: $19000 - 12096 = 6904$

Answer: Sagar's savings are ₹6,904.

Let's Do 3.3: Find the difference

1. $9000 - 1409 = 7591$

2. $3000 - 1772 = 1228$

3. $9000 - 1310 = 7690$

4. $5000 - 3446 = 1554$

5. $5000 - 2986 = 2014$

6. $3000 - 2499 = 501$

Let's Revise

1. The process of taking away and finding the remaining value is called **subtraction**.
2. The number from which we subtract is called the **minuend**.
3. The number to be subtracted is called the **subtrahend**.
4. Minuend - Subtrahend = **difference**.
5. By subtracting 0 from any number, we get the **same** number.

MCQ

1: Triangle Sums : Each side of the triangle adds up to 6500.

Left Side : $2685 + a + 2973 = 6500$

$$5658 + a = 6500, \quad a = 842$$

Bottom Side : $2973 + c + 3100 = 6500$

$$6073 + c = 6500, \quad c = 427$$

Right Side : $2685 + b + 3100 = 6500$

$$5785 + b = 6500, \quad b = 715$$

2: Place Value

Find the number that is 200 less than 12 hundreds and 5 tens.

12 hundreds = 1200

5 tens = 50

Total = 1250

$1250 - 200 = 1050$

3. $37 - 13 = 24$ Then = 5 (Check : $4 (8) + 5 = 32 + 5 = 37$)
Values : 8, 5
4. Water Volume
Initial water: 470 ml
Added water: + 550 ml
Total before spill: 1020 ml
Spilled water: - 250ml
Remaining: 770 ml
5. Block Units Given 1 Small Block = 2 units.
Large stacks (10 small blocks each) = 10×2
Visual calculation: 3 (stacks)
 $32 \times 20 = 60$ units
 $10 \times 20 + 4 \times 2 = 28$ units
 $60 - 28 = 32$



MULTIPLICATION

Let's Start

1. First Friend (Boy in Teal)
Problem : 44×7
Calculation : $40 \times 7 = 280$ and $4 \times 7 = 28$. So, $280 + 28 = 308$
Match: His jar is the one with 308 jems.
2. Second Friend (Boy in Pink)
Problem: 34×21
Calculation: $34 \times 20 = 680$ and $34 \times 1 = 34$.
and So, $680 + 34 = 714$
Match: His jar is the one with 714 jems.
3. Third Friend (Girl in Yellow)
Problem: 17×29
Calculation: $17 \times 30 = 510$ and $510 - 17 = 493$
Match: Her jar is the one with 493 jems.
4. Fourth Friend (Girl in Lime)
Problem: 11 Fourth Friend (Girl in Lime)
Problem: 11×49
Calculation: $10 \times 49 = 490$ and $1 \times 49 = 49$. So, $490 + 49 = 539$
Match: Her jar is the one with 539 jems.

Task - 1

1. Find the product :

- | | | |
|--------------------------|----------------------------|----------------------------|
| (a) $4 \times 2 = 40$ | (b) $12 \times 7 = 84$ | (c) $11 \times 8 = 88$ |
| (d) $19 \times 9 = 144$ | (e) $9 \times 10 = 90$ | (f) $10 \times 12 = 120$ |
| (g) $10 \times 60 = 600$ | (h) $9 \times 100 = 900$ | (i) $72 \times 10 = 720$ |
| (j) $14 \times 7 = 98$ | (k) $15 \times 5 = 75$ | (l) $14 \times 8 = 112$ |
| (m) 91×10 | (n) $10 \times 145 = 1450$ | (o) $10 \times 227 = 2270$ |

2. Write the missing factors:

- | | | |
|---------------------------|--------------------------|-------------------------|
| (a) $4 \times 10 = 40$ | (b) $6 \times 5 = 30$ | (c) $9 \times 10 = 90$ |
| (d) $40 \times 40 = 1600$ | (e) $30 \times 30 = 900$ | (f) $5 \times 60 = 300$ |

3. Multiply :

- | | | |
|--------------------------|-------------------------|-------------------------|
| (a) $70 \times 20 = 140$ | (b) $8 \times 70 = 560$ | (c) $6 \times 30 = 180$ |
| (d) $5 \times 90 = 450$ | (e) $3 \times 80 = 240$ | (f) $7 \times 60 = 420$ |

Task - 2 (The multiplication tables from $1 \times$ to $12 \times$):

- $1 \times$ table : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- $2 \times$ table : 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
- $3 \times$ table : 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36
- $4 \times$ table : 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
- $5 \times$ table : 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60
- $6 \times$ table : 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72
- $7 \times$ table : 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84
- $8 \times$ table : 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96
- $9 \times$ table : 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, 108
- $10 \times$ table : 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120
- $11 \times$ table : 11, 22, 33, 44, 55, 66, 77, 88, 99, 110, 121, 132
- $12 \times$ table : 12, 24, 36, 48, 60, 72, 84, 96, 108, 120, 132, 144

Let's Do

1. Do the following multiplications

- | | | |
|----------------------------|----------------------------|----------------------------|
| (a) $24 \times 10 = 240$ | (b) $38 \times 100 = 3800$ | (c) $7 \times 10 = 70$ |
| (d) $243 \times 10 = 2430$ | (e) $87 \times 100 = 8700$ | (f) $4 \times 1000 = 4000$ |
| (g) $30 \times 10 = 300$ | (h) $45 \times 0 = 0$ | |

2. Find the product

- | | | |
|-------------------------|-------------------------|-------------------------|
| (a) $52 \times 6 = 312$ | (b) $64 \times 9 = 576$ | (c) $63 \times 8 = 504$ |
| (d) $92 \times 7 = 644$ | (e) $39 \times 9 = 351$ | (f) $69 \times 6 = 414$ |

3. Find the product one by one.

- | | | |
|----------------------------|----------------------------|----------------------------|
| (a) $672 \times 4 = 2688$ | (b) $537 \times 9 = 4833$ | (c) $199 \times 9 = 1791$ |
| (d) $109 \times 8 = 872$ | (e) $531 \times 4 = 2124$ | (f) $896 \times 3 = 2688$ |
| (g) $1109 \times 8 = 8872$ | (h) $2018 \times 4 = 8072$ | (i) $3118 \times 3 = 9354$ |

Let's Do 4.2

1. Find the product

- | | | |
|---------------------------|---------------------------|---------------------------|
| (a) $72 \times 64 = 4608$ | (b) $57 \times 39 = 2223$ | (c) $79 \times 19 = 1501$ |
| (d) $89 \times 18 = 1602$ | (e) $57 \times 34 = 1938$ | (f) $93 \times 83 = 7719$ |
| (g) $79 \times 79 = 6241$ | (h) $68 \times 94 = 6392$ | (i) $48 \times 13 = 624$ |

2. Find the product

- | | | |
|----------------------------|-----------------------------|----------------------------|
| (a) $216 \times 24 = 5184$ | (b) $827 \times 19 = 15713$ | (c) $349 \times 17 = 5933$ |
|----------------------------|-----------------------------|----------------------------|

3. Multiply the following

- | | | |
|--------------------------|---------------------------|---------------------------|
| (a) $23 \times 21 = 483$ | (b) $41 \times 29 = 1189$ | (c) $31 \times 12 = 372$ |
| (d) $30 \times 11 = 330$ | (e) $57 \times 32 = 1824$ | (f) $83 \times 36 = 2988$ |

4. Fill in the Blanks

- | | | |
|---|---|-----------------------------------|
| (a) $37 \times 1 = 37$ | (b) $56 \times 0 = 0$ | (c) $34 \times 58 = 58 \times 34$ |
| (d) $1 \times 386 = 386$ | (e) $24 \times (10 + 5) = (24 \times 10) + (24 \times 5)$ | |
| (f) $2735 \times 10 = 27350$ | (g) $698 \times 100 = 69800$ | |
| (h) $2 \times (5 \times 7) = (2 \times 5) \times 7$ | | |

5. Find the Product

- | | | |
|------------------------------|------------------------------|------------------------------|
| (a) $345 \times 11 = 3,795$ | (b) $783 \times 23 = 18,009$ | (c) $609 \times 15 = 9,135$ |
| (d) $216 \times 47 = 10,152$ | (e) $49 \times 38 = 1,862$ | (f) $804 \times 10 = 8,040$ |
| (g) $72 \times 54 = 3,888$ | (h) $56 \times 100 = 5,600$ | (i) $839 \times 10 = 8,390$ |
| (j) $572 \times 29 = 16,588$ | (k) $265 \times 11 = 2,915$ | (l) $391 \times 64 = 25,024$ |

Task - 3

- | | |
|---|---|
| (a) $57 \times 2 \rightarrow 60 \times 2 = 120$ | (b) $32 \times 4 \rightarrow 30 \times 4 = 120$ |
| (c) $29 \times 3 \rightarrow 30 \times 3 = 90$ | (d) $15 \times 6 \rightarrow 20 \times 6 = 120$ |

Let's Do 4.3

- | | |
|---|----------------------------------|
| 1. $58 \times 18 = 1,044$ cups | 2. $259 \times 34 = 8,806$ pages |
| 3. $270 \times 43 = 11,610$ words | 4. $10 \times 12 = 120$ apples |
| 5. $167 \times 41 = 6,847$ newspapers | 6. $48 \times 14 = 672$ students |
| 7. $\text{₹}97 \times 43 = \text{₹}4,171$ | 8. $65 \times 72 = 4,680$ km |
| 9. $168 \times 19 = 3,192$ books | |

Let's Do 4.4

- | | |
|---|--|
| 1. $356 \times 45 = 16,020$ fish | 2. $\text{₹}25 \times 340 = \text{₹}8,500$ |
| 3. $165 \times 75 = 12,375$ books | 4. $2018 \times 9 = 18,162$ toys |
| 5. $\text{₹}125 \times 9 = \text{₹}1,125$ | |

Let's Revise

1. Multiplication means **repeated addition**
2. Multiplicand $\times$ multiplier = **product**
3. The product of 0 and any number is **0**
4. If we multiply 1 with any number, we get the **same number** as the product.
5. The product of two numbers remains the **same** in whatever order they are multiplied.

6. $27 \times 10 = 270$

8. $245 \times 1000 = 2,45,000$

10. $42 \times 400 = 16,800$

12. $71 \times 500 = 35,500$

14. $63 \times 100 = 6300$

7. $48 \times 100 = 4,800$

9. $120 \times 100 = 12,000$

11. $23 \times 100 = 2300$

13. $27 \times 1000 = 27000$

15. $12 \times 100 = 1200$

MCQ

1. (d) multiplier

2. (d) 49

3. (c) 1000

4. (b) 385

5. (a) 444

**DIVISION****Task - 1**

1. $72 \div 6 = 12$

2. $78 \div 13 = 6$

3. $45 \div 3 = 15$

4. $8 \div 8 = 1$

5. $18 \div 6 = 3$

6. $21 \div 7 = 3$

7. $77 \div 7 = 11$

8. $182 \div 14 = 13$

9. $18 \div 2 = 9$

10. $28 \div 7 = 4$

11. $55 \div 5 = 11$

12. $140 \div 10 = 14$

13. $70 \div 5 = 14$

14. $42 \div 3 = 14$

15. $35 \div 5 = 7$

16. $28 \div 14 = 2$

Fill the grid

Row 1: $72 \div 9 = 8$ $84 \div 12 = 7$

Middle row: $6 \div 3 = 2$ $3 \div 3 = 1$

Bottom row: $18 \div 3 = 6$ $6 \div 12 = 1$

Right column quotients: $8 \div 8 = 1$

Task - 2**1. Divide and find quotient**

(a) $48 \div 2 = 24$

(b) $33 \div 3 = 11$

(c) $44 \div 4 = 11$

(d) $55 \div 5 = 11$

(e) $66 \div 6 = 11$

(f) $77 \div 7 = 11$

(g) $88 \div 8 = 11$

(h) $68 \div 2 = 34$

(i) $484 \div 4 = 121$

(j) $966 \div 3 = 322$

(k) $286 \div 2 = 143$

(l) $396 \div 3 = 132$

(m) $248 \div 2 = 124$

(n) $699 \div 3 = 233$

(o) $555 \div 5 = 111$

(p) $848 \div 4 = 212$

2. Divide and find quotient

(a) $56 \div 2 = 28$

(b) $45 \div 3 = 15$

(c) $60 \div 4 = 15$

(d) $85 \div 5 = 17$

(e) $78 \div 6 = 13$

(f) $84 \div 7 = 12$

(g) $96 \div 8 = 12$

(h) $108 \div 9 = 12$

(i) $54 \div 2 = 27$

(j) $528 \div 4 = 132$

(k) $790 \div 5 = 158$

(l) $798 \div 6 = 133$

(m) $868 \div 7 = 124$

(n) $936 \div 8 = 117$

(o) $875 \div 5 = 175$

(p) $972 \div 4 = 243$

(q) $792 \div 4 = 198$

(r) $833 \div 7 = 119$

(s) $516 \div 3 = 172$

(t) $578 \div 2 = 289$

Let's Do 5.1**1. Division properties**

(a) $0 \div 23 = 0$

(b) $57 \div 57 = 1$

(c) $73 \div 1 = 73$

(d) $29 \div 29 = 1$

(e) $0 \div 16 = 0$

(f) $374 \div 374 = 1$

(g) $3762 \div 1 = 3762$

(h) $0 \div 4797 = 0$

2. Divide by 10 / 100 / 1000 (no actual division)

Division	Quotient	Remainder
(a) $34 \div 10 \rightarrow$	$Q = 3,$	$R = 4$
(b) $726 \div 10 \rightarrow$	$Q = 72,$	$R = 6$
(c) $536 \div 100 \rightarrow$	$Q = 5,$	$R = 36$
(d) $8734 \div 10 \rightarrow$	$Q = 873,$	$R = 4$
(e) $6895 \div 100 \rightarrow$	$Q = 68,$	$R = 95$
(f) $9642 \div 1000 \rightarrow$	$Q = 9,$	$R = 642$
(g) $6740 \div 100 \rightarrow$	$Q = 67,$	$R = 40$

3. Verify division

(b) $2749 \div 6,$	$Q = 458,$	$R = 1 \rightarrow (458 \times 6) + 1 = 2748 + 1 = 2749 \checkmark$
(c) $807 \div 3,$	$Q = 269,$	$R = 0 \rightarrow (269 \times 3) + 0 = 807 \checkmark$
(d) $506 \div 4,$	$Q = 126,$	$R = 2 \rightarrow (126 \times 4) + 2 = 504 + 2 = 506 \checkmark$
(e) $428 \div 8,$	$Q = 53,$	$R = 4 \rightarrow (53 \times 8) + 4 = 424 + 4 = 428 \checkmark$

4. Do the divisions

(a) $4614 \div 4 = 1153,$ R2	(b) $7120 \div 5 = 1424$
(c) $5454 \div 3 = 1818$	(d) $1460 \div 8 = 182,$ R4
(e) $9999 \div 8 = 1249,$ R7	(f) $7060 \div 7 = 1008,$ R4
(g) $9221 \div 5 = 1844,$ R1	(h) $5342 \div 8 = 667,$ R6
(i) $7447 \div 4 = 1861,$ R3	(j) $5154 \div 6 = 859$
(k) $7165 \div 2 = 3582,$ R1	(l) $5674 \div 4 = 1418,$ R2
(m) $5701 \div 3 = 1900,$ R1	(n) $1450 \div 8 = 181,$ R2
(o) $9300 \div 9 = 1033,$ R3	(p) $8495 \div 2 = 4247,$ R1
(q) $3275 \div 3 = 1091,$ R2	(r) $8317 \div 7 = 1188,$ R1
(s) $7065 \div 7 = 1009,$ R2	(t) $5067 \div 5 = 1013,$ R2

Let's Do 5.2

- 84 glasses $\div$ 7 boxes $\rightarrow$ 12 glasses per box
- 39 players $\div$ 5 teams $\rightarrow$ 7 players per team, 4 left over
- 16 wheels $\div$ 2 (bicycle wheels) $\rightarrow$ 8 bicycles
- 27 wheels $\div$ 3 (auto-rickshaw wheels) $\rightarrow$ 9 auto-rickshaws
- 20 legs $\div$ 4 (cow legs) $\rightarrow$ 5 cows
- 32 chocolates $\div$ 8 per box $\rightarrow$ 4 boxes
- 40 people $\div$ 5 per packet $\rightarrow$ 8 Rasna packets
- 480 muffins $\div$ 8 per basket $\rightarrow$ 60 baskets
- 180 m $\div$ 10 students $\rightarrow$ 18 m per student

Critical Thinking — Find missing dividend & remainder

- Divisor=3, quotient=16 $\rightarrow$ dividend = 48, subtract 3 $\rightarrow$ 19, subtract 18 $\rightarrow$ R=1

2. Divisor=6, quotient=14 $\rightarrow$ dividend=84, R=4
3. Divisor=5, quotient=18 $\rightarrow$ dividend=90, R=2
4. Divisor=2, quotient=25 $\rightarrow$ dividend=50, R=1

Let's Do 5.3

1. 917 shirts $\div$ 7 days $\rightarrow$ 131 shirts/day
2. ₹220 $\div$ 11 books $\rightarrow$ ₹20 per book
3. 832 pictures $\div$ 8 per page $\rightarrow$ 104 pages

Let's Revise

4. ₹180 $\div$ ₹15 = 12 packets
5. 1728 $\div$ 12 = 144 books per author

Let's Revise — Fill in the blanks

- | | | |
|----------------------------|--------------------|---------------------------|
| 1. Division | 2. Highest place | 3. Quotient and Remainder |
| 4. Quotient | 5. 1 | 6. 0 |
| 7. same number | 8. Q=2, R= 45 | 9. Q=3, R=26 |
| 10. $8 \div 8 = 1$ | 11. $0 \div 9 = 0$ | 12. $8 \div 1 = 8$ |
| 13. $7 \div 0 =$ undefined | 14. = Dividend | |

MCQ

1. (a) 36
2. (c) $52 \div 4$
3. (c) 7
4. (d) 40
5. (b) 42



FRACTIONAL NUMBERS

TASK - 1

Tick the figures which are divided into 2 equal part:

- | | | | |
|----------|----------|----------|----------|
| 1. $1/2$ | 2. $1/3$ | 3. $1/2$ | 4. $1/4$ |
| 5. $1/4$ | 6. $1/4$ | | |

TASK - 2

Write shaded portion as fraction

1. Circle, all 6 parts shaded $\rightarrow 6/6 = 1$
2. Circle, all 8 parts shaded $\rightarrow 8/8 = 1$
3. Rectangle, 2 of 4 cols shaded $\rightarrow 2/4$
4. Rectangle, 4 of 5 rows shaded $\rightarrow 4/5$
5. Rectangle, 1 of 2 cols shaded $\rightarrow 1/2$
6. Rectangle, 3 of 4 rows shaded $\rightarrow 3/4$
7. Rectangle, 1 of 3 cols shaded $\rightarrow 1/3$
8. Circle, 3 of 4 parts shaded $\rightarrow 3/4$
9. Rectangle, 3 of 6 cols shaded $\rightarrow 3/6$
10. Rectangle, 2 of 5 cols shaded $\rightarrow 2/5$

11. Rectangle, 2 of 7 cols shaded $\rightarrow 2/7$

12. Circle, 5 of 6 parts shaded $\rightarrow 5/6$

Let's Do 6.1

1. Write in digits

(a) Seven-ninths = $7/9$

(b) Four-eighths = $4/8$

(c) Six-sevenths = $6/7$

(d) Five-twelfths = $5/12$

2. Write in words

(a) $1/4$ = one-fourth

(b) $1/2$ = one-half

(c) $3/4$ = three-fourths

(d) $4/5$ = four-fifths

(e) $11/15$ = eleven-fifteenths

(f) $3/5$ = three-fifths

3. Complete the table :

(a) $\frac{1}{2}$ of 36 = 18

(b) $\frac{1}{2}$ of 24 = 12

(c) $\frac{1}{2}$ of 30 = 15

(d) $\frac{1}{12}$ of 72 = 6

(e) $\frac{1}{3}$ of 45 = 15

(f) $\frac{1}{3}$ of 54 = 18

(g) $\frac{1}{4}$ of 48 = 12

(h) $\frac{1}{2}$ of 38 = 19

(i) $\frac{1}{5}$ of 55 = 11

(j) $\frac{1}{8}$ of 56 = 7

4. $\frac{3}{5}$ of 30 = $(30 \div 5) \times 3 = 18$ blue pencils

5. $\frac{5}{6}$ of 24 = $(24 \div 6) \times 5 = 20$ roses

6. $\frac{3}{7}$ of 49 = $(49 \div 7) \times 3 = 21$ people

7. $\frac{2}{3}$ of 36 = $(36 \div 3) \times 2 = 24$ people ate orange

Let's Do 6.2

1. First four equivalent fractions

(a) $2/5 = 4/10 = 6/15 = 8/20 = 10/25$

(b) $1/2 = 2/4 = 3/6 = 4/8 = 5/10$

(c) $1/3 = 2/6 = 3/9 = 4/12 = 5/15$

(d) $6/11 = 12/22 = 18/33 = 24/44 = 30/55$

2. Compare using $>$, $<$ or $=$

(a) $3/6 = 2/4$

(b) $1/6 < 3/8$

(c) $1/2 = 5/10$

(d) $5/10 > 3/8$

(e) $2/4 > 1/3$

(f) $2/4 > 3/8$

3. Fill blanks with $>$, $<$ or $=$

(a) $1/4 < 3/4$

(b) $3/9 > 1/9$

(c) $2/15 = 2/15$

(d) $5/6 > 1/6$

(e) $1/4 > 1/6$

(f) $1/4 < 1/2$

(g) $4/6 > 4/8$

(h) $2/6 < 2/5$

(i) $1/6 < 2/6$

(j) $3/4 > 2/4$

(k) $4/6 > 1/6$

(l) $1/3 = 1/3$

4. Arrange the following fractions in the given order:

(a) $2/7, 6/7, 3/7, 5/7 \rightarrow$ A.O = $2/7, 3/7, 5/7, 6/7$ | D.O = $6/7, 5/7, 3/7, 2/7$

(b) $3/8, 4/8, 7/8, 2/8 \rightarrow$ A.O = $2/8, 3/8, 4/8, 7/8$ | D.O = $7/8, 4/8, 3/8, 2/8$

(c) $2/5, 3/5, 7/5, 4/5 \rightarrow$ A.O = $2/5, 3/5, 4/5, 7/5$ | D.O = $7/5, 4/5, 3/5, 2/5$

(d) $4/9, 8/9, 7/9, 3/9 \rightarrow$ A.O = $3/9, 4/9, 7/9, 8/9$ | D.O = $8/9, 7/9, 4/9, 3/9$

Task - 5

1. Add the following and shade the resultant fractions:

- (a) $1/3 + 1/3 = 2/3$ (shade 2 of 3 parts)
(b) $1/6 + 2/6 = 3/6$ (shade 3 of 6 parts)
(c) $4/12 + 4/12 = 8/12$ (shade 8 of 12 parts)

2. Subtraction the following and shade the resultant fractions:

- (a) $5/9 - 2/9 = 3/9$ (shade 3 of 9 parts)
(b) $3/4 - 2/4 = 1/4$ (shade 1 of 4 parts)
(c) $7/10 - 4/10 = 3/10$ (shade 3 of 10 parts)

Let's Do 6.3

1. Do the following addition:

- (a) $5/12 + 1/12 = 6/12$ (b) $5/17 + 4/17 = 9/17$
(c) $3/10 + 1/10 = 4/10$ (d) $7/13 + 1/13 = 8/13$
(e) $13/19 + 6/19 = 19/19 = 1$ (f) $5/9 + 4/9 = 9/9 = 1$

2. Do the following subtractions:

- (a) $8/13 - 4/13 = 4/13$ (b) $21/29 - 2/29 = 19/29$
(c) $6/10 - 1/10 = 5/10$ (d) $12/13 - 4/13 = 8/13$
(e) $41/50 - 12/50 = 29/50$ (f) $5/9 - 4/9 = 1/9$

3. Do the following

- (a) $7/11 - 3/11 = 4/11$ oranges left
(b) $5/8 + 3/8 = 8/8 = 1$ whole book read
(c) $1 - 3/5 = 2/5$ cake left
(d) $3/4 + 1/4 = 4/4 = 1$ kg total vegetables

Let's Revise

1. like fractions 2. greatest 3. smallest 4. equivalent
5. smallest 6. greatest 7. numerator=4, denominator=5
8. five-sevenths 9. D.O.: 8/9, 7/9, 5/9, 3/9
10. A.O.: 3/9, 5/9, 6/9, 7/9

MCQ

1. (d) 21/40 2. (a) 1/2 3. (d) 5/7



MEASUREMENT OF LENGTH

Task - 1

Which of the following lengths will be measured by using a ruler? use (✓) or (X)

- (a) Height of friend X Too tall for a ruler (b) Book ✓ Small enough

- (c) Pencil ✓ Small enough
 (e) Desk ✗ Too large
 (g) Eraser ✓ Small enough
 (i) Bag ✗ Too large
 (k) Sharpener ✓ Small enough

- (d) Blackboard ✗ Too large
 (f) Box ✓ Small enough
 (h) Piece of chalk ✓ Small enough
 (j) Bench ✗ Too large
 (l) Room ✗ Way too large

Task 2 — Length of Each Bar

- | | | | | |
|----------|----------|---------|----------|-----------|
| 1. 10 cm | 2. 5 cm | 3. 9 cm | 4. 11 cm | 5. 6 cm |
| 6. 12 cm | 7. 14 cm | 8. 8 cm | 9. 8 cm | 10. 15 cm |

Let's Do 7.1

1. Convert the Following

- | | |
|--------------------------|--|
| (b) 32 m into mm | $1 \text{ m} = 1000 \text{ mm} \rightarrow 32 \times 1000 = 32,000 \text{ mm}$ |
| (c) 4 m 19 cm into cm | $4 \times 100 + 19 = 419 \text{ cm}$ |
| (d) 12 m 5 mm into mm | $12 \times 1000 + 5 = 12,005 \text{ mm}$ |
| (e) 32 km into m | $32 \times 1000 = 32,000 \text{ m}$ |
| (f) 4019 m into km and m | $4019 \div 1000 = 4 \text{ km } 19 \text{ m}$ |

2 Find the Sum

- (a) $336 \text{ km } 553 \text{ m} + 351 \text{ km } 325 \text{ m} = 687 \text{ km } 878 \text{ m}$
 (b) $176 \text{ km } 585 \text{ m} + 221 \text{ km } 300 \text{ m} = 397 \text{ km } 885 \text{ m}$
 (c) $285 \text{ km } 406 \text{ m} + 393 \text{ km } 632 \text{ m} = 679 \text{ km } 38 \text{ m}$
 (d) $235 \text{ m } 44 \text{ cm} + 142 \text{ m } 32 \text{ cm} = 377 \text{ m } 76 \text{ cm}$
 (e) $867 \text{ m } 36 \text{ cm} + 191 \text{ m } 42 \text{ cm} = 1058 \text{ m } 78 \text{ cm}$
 (f) $695 \text{ m } 56 \text{ cm} + 333 \text{ m } 21 \text{ cm} = 1028 \text{ m } 77 \text{ cm}$
 (g) $325 \text{ cm } 6 \text{ mm} + 244 \text{ cm } 3 \text{ mm} = 569 \text{ cm } 9 \text{ mm}$
 (h) $207 \text{ cm } 4 \text{ mm} + 193 \text{ cm } 4 \text{ mm} = 400 \text{ cm } 8 \text{ mm}$
 (i) $450 \text{ cm } 7 \text{ mm} + 132 \text{ cm } 2 \text{ mm} = 582 \text{ cm } 9 \text{ mm}$

3. Find the Difference

- (a) $455 \text{ km } 589 \text{ m} - 153 \text{ km } 451 \text{ m} = 302 \text{ km } 138 \text{ m}$
 (b) $359 \text{ km } 638 \text{ m} - 332 \text{ km } 623 \text{ m} = 27 \text{ km } 15 \text{ m}$
 (c) $755 \text{ km } 467 \text{ m} - 678 \text{ km } 390 \text{ m} = 77 \text{ km } 77 \text{ m}$
 (d) $237 \text{ m } 56 \text{ cm} - 134 \text{ m } 33 \text{ cm} = 103 \text{ m } 23 \text{ cm}$
 (e) $634 \text{ m } 93 \text{ cm} - 363 \text{ m } 42 \text{ cm} = 271 \text{ m } 51 \text{ cm}$
 (f) $874 \text{ km } 768 \text{ m} - 672 \text{ km } 115 \text{ m} = 202 \text{ km } 653 \text{ m}$
 (g) $288 \text{ km } 805 \text{ m} - 155 \text{ km } 523 \text{ m} = 133 \text{ km } 282 \text{ m}$
 (h) $599 \text{ cm } 6 \text{ mm} - 287 \text{ cm } 3 \text{ mm} = 312 \text{ cm } 3 \text{ mm}$
 (i) $992 \text{ cm } 8 \text{ mm} - 461 \text{ cm } 3 \text{ mm} = 531 \text{ cm } 5 \text{ mm}$

Let's Do 7.2

Word Problems

- Suman's ribbon: $18\text{ m } 7\text{ cm} + 17\text{ m } 29\text{ cm}$
 $\text{cm: } 7 + 29 = 36\text{ cm}$ $\text{m: } 18 + 17 = 35\text{ m}$
Total = $35\text{ m } 36\text{ cm}$
- Santosh's rope: $45\text{ m } 65\text{ cm} + 110\text{ m } 78\text{ cm}$
 $\text{cm: } 65 + 78 = 143\text{ cm} = 1\text{ m } 43\text{ cm}$ $\text{m: } 45 + 110 + 1 = 156\text{ m}$
Total = $156\text{ m } 43\text{ cm}$
- Sandhya's cloth: $35\text{ m} \div 5$ Each piece = 7 m
- Toothbrushes: $16\text{ cm} - 14\text{ cm} = 2\text{ cm}$
Sister's toothbrush is longer by 2 cm

Let's Revise — Fill in the Blanks

- | | | |
|--------------|-------------------|--------------------|
| 1. meter (m) | 2. kilometer (km) | 3. centimeter (cm) |
| 4. 100 | 5. 1000 | 6. 100 |
| 7. 1000 | 8. 100 | 9. 1000 |
| 10. 1 cm | | |

MCQ

- | | | |
|----------------|-----------------|---------------|
| 1. (d) 2970 cm | 2. (b) 2 m 5 cm | 3. (b) 830 km |
|----------------|-----------------|---------------|



MEASUREMENT OF LENGHT

Task - 1

1. Write the names of objects that you can measure in gram and kilogram.

Units	Names of Objects
Grams	Eraser, Pen, Coin
Kilograms	Bag, Watermelon, Rice sack

2. Draw suitable weights:

- (b) $3\text{ kg } 500\text{ g} \rightarrow$ One 3 kg weight + one 500 g weight
(c) $2\text{ kg } 100\text{ g} \rightarrow$ One 2 kg weight + one 100 g weight
(d) $1\text{ kg } 250\text{ g} \rightarrow$ One 1 kg weight + one 250 g weight

3. Fill in the blanks (from the balance scale pictures):

- (a) 3 oranges weigh as much as 6 tomatoes
(b) 1 papaya weighs as much as 6 bananas
(c) 2 apples weigh as much as 4 lemons

Task - 2

1. Convert kg to grams:

kg	Gram
(a) 2 kg	2000 g
(b) 4 kg	4000 g
(c) 8 kg	8000 g
(d) 10 kg	10000 g
(e) 7 kg	7000 g
(f) 5 kg	5000 g

2. Fill in the blanks:

- (a) 2 kg 500 g = 2500 g (b) 3 kg 50 g = 3050 g
(c) 4 kg 250 g = 4250 g (d) 5 kg 100 g = 5100 g

3. Choose the correct answer:

- (a) 8 kg 50 g = 8050 g (b) 3 kg 250 g = 3250 g
(c) 2 kg 4 g = 2004 g

Computational Thinking — Puzzle:

Left pan: Circle + Triangle = 7 kg Right pan: Circle + Square = 7 kg
Ans : (c) Square and Triangle are of the same weight

Let's Do 8.1

1. Find the sum:

- (a) 37 Kg 148 g + 156 kg 20 g = 57 kg 304g
(b) 24 kg 447 g + 46 kg 157g = 70 kg 604g
(c) 16 kg 372 g + 73 kg 435 g = 89 kg 807g
(d) 50 g 442 mg + 22 g 336 mg = 72g 778mg
(e) 13 g 325 mg + 44 g 135 mg = 57g 460mg
(f) 92 g 361 mg + 04 g 550 mg = 96 g 911 mg

2. Find the difference:

- (a) 9 kg 918 g – 5 kg 350 g = 4 kg 568 g
(b) 6 kg 548 g – 4 kg 334 g = 2 kg 214 g
(c) 12 kg 673 g – 6 kg 195 g = 6 kg 478 g
(d) 7 g 945 mg – 3 g 330 mg = 4 g 615 mg
(e) 17 g 348 mg – 8 g 237 mg = 9 g 111 mg
(f) 29 g 874 mg – 14 g 239 mg = 15 g 635 mg

Word Problems (Let's Do 8.2):

1. Sugar: 8 kg 600 g + Rice: 6 kg 400 g + Wheat: 3 kg 500 g = 18 kg 500 g
2. 85 kg 000 g – 35 kg 500 g = 49 kg 500 g
3. 12 kg 500 g + 15 kg 000 g + 7 kg 500 g = 35 kg
4. 57 kg 500 g – 21 kg 380 g = 36 kg 120 g

5. $80\text{ kg } 500\text{ g} - 15\text{ kg } 500\text{ g} = 65\text{ kg } 000\text{ g} = 65\text{ kg}$
6. $10\text{ kg } 500\text{ g} + 7\text{ kg } 800\text{ g} + 5\text{ kg } 800\text{ g} = 24\text{ kg } 100\text{ g}$
7. $1\text{ kg } 000\text{ g} - 875\text{ g} = 1000\text{ g} - 875\text{ g} = 125\text{ g}$
8. $8\text{ kg } 000\text{ g} - 3\text{ kg } 250\text{ g} = 7\text{ kg } 1000\text{ g} - 3\text{ kg } 250\text{ g} = 4\text{ kg } 750\text{ g}$
9. Total: $120\text{ kg} \mid \text{Two children: } 38\text{ kg } 450\text{ g} + 42\text{ kg } 325\text{ g} = 80\text{ kg } 775\text{ g}$
 $= 39\text{ kg } 225\text{ g}$

Let's Revise

- | | | |
|---------------|--------------------|--------------|
| 1. gram (g) | 2. kilograms (kg) | 3. grams (g) |
| 4. 1000 grams | 5. 1000 milligrams | 6. 1000 |
| 7. 1000 | | |

8. Add and write in grams:

- (a) $23\text{ kg } 350\text{ g} + 42\text{ kg } 470\text{ g} = 65\text{ kg } 820\text{ g}$
- (b) $36\text{ kg } 60\text{ g} + 58\text{ kg } 80\text{ g} = 94\text{ kg } 140\text{ g}$
- (c) $49\text{ kg } 40\text{ g} + 70\text{ kg } 70\text{ g} = 119\text{ kg } 110\text{ g}$
- (d) $80\text{ kg } 8\text{ g} + 35\text{ kg } 5\text{ g} = 115\text{ kg } 13\text{ g}$
- (e) $40\text{ kg } 315\text{ g} + 16\text{ kg } 460\text{ g} + 22\text{ kg } 570\text{ g} = 79\text{ kg } 345\text{ g}$
- (f) $59\text{ kg } 556\text{ g} + 68\text{ kg } 750\text{ g} + 73\text{ kg } 490\text{ g} = 201\text{ kg } 796\text{ g}$
- (g) $68\text{ kg } 333\text{ g} + 70\text{ kg } 850\text{ g} + 80\text{ kg } 360\text{ g} = 219\text{ kg } 543\text{ g}$

MCQ:

- | | | | |
|-------------|-----------------|--------------------|--------------------|
| 1. (b) 8 | 2. (b) 11 | 3. (c) 150 g | 4. (c) 47,500 kg |
| 5. (b) 6 kg | 6. (c) 124820 g | 7. (d) 83 kg 800 g | 5. (a) 14 kg 219 g |



MEASUREMENT OF CAPACITY

Task - 1

1. Make a list of five-five objects that are measured in litres and milliliters.

S.No.	Litres	Millilitres
1.	Bucket of water	Cough syrup bottle
2.	Water bottle (large)	Eye drops
3.	Cooking oil can	Perfume bottle
4.	Milk packet (1L)	Ink bottle
5.	Petrol in tank	Nail polish bottle

Q2. Amount of liquid in each jug:

- (a) Water level is at the 2 litre / 2000 ml mark
- (b) Water level is at the 1 litre / 1000 ml mark

Task - 2

1. Convert the following:

Litres	Millilitres
(a) 3 l	3000 ml
(b) 7 l	7000 ml
(c) 6 l	6000 ml
(d) 12 l	12000 ml
(e) 9 l	9000 ml
(f) 8 l	8000 ml

2. Fill in the blanks:

- (a) 1 l 500 ml = 1500 ml
(b) 2 l 300 ml = 2300 ml
(c) 3 l 250 ml = 3250 ml
(d) 8 l 500 ml = 8500 ml
(e) 6 l 150 ml = 6150 ml

3. Match the following:

- | | |
|----------------|-------------|
| (A) 2 l 500 ml | (b) 2500 ml |
| (B) 2 l 50 ml | (a) 2050 ml |
| (C) 2 l 5 ml | (d) 2005 ml |
| (D) 2 l 150 ml | (e) 2150 ml |
| (E) 2 l 510 ml | (c) 2510 ml |

Let's Do 9.1 — Q1. Find the sum:

- (a) 47 kl 348 + 60 kl 256 l = 107 kl 604 l
(b) 54 kl 445 l + 36 kl 157 l = 90 kl 602 l
(c) 19 kl 372l + 33 kl 434 l = 52 kl 806 l
(d) 90 l 446 ml + 24 l 236 ml = 114 l 682 ml
(e) 43 l 385 ml + 34 l 035 ml = 77 l 420 ml
(f) 82l 261ml + 03 l 590 ml = 85 l 851 ml

2. Find the difference:

- (a) 13 kl 958 l - 12 kl 850 l = 1kl 108l
(b) 9 kl 649 l - 3 kl 634 l = 6kl 15l
(c) 32 kl 693 l - 26 kl 193 l = 6kl 500l
(d) 12 l 846ml - 8 l 420ml = 4l 426ml
(e) 45 l 646 ml - 23 l 437ml = 22l 209ml
(f) 59l 674 ml - 34l 538 ml = 25l 136ml

Let's Do 9.2

1. 89 l 500 ml + 92 l 750 ml = 182l 250ml
Answer: 182 l 250 ml of kerosene

2. Ravi's milk: $12\text{ l } 500\text{ ml} + 16\text{ l } 275\text{ ml} + 23\text{ l } 100\text{ ml} = 51\text{ l } 875\text{ ml}$

Answer: $51\text{ l } 875\text{ ml}$

3. Rohit's milk: $45\text{ l } 500\text{ ml} - 4\text{ l } 750\text{ ml} = 40\text{ l } 750$

Answer: Rohit should buy $40\text{ l } 750\text{ ml}$ from the market

4. Manoj's bath water: $5\text{ l } 000\text{ l} + 8\text{ l } 500\text{ ml} = 13\text{ l } 500$

Answer: $13\text{ l } 500\text{ ml}$

Let's Revise:

1. Capacity is measured in **litres and millilitres**
2. **Litre** is the standard unit of capacity
3. 1 litre = **1000** millilitres
4. To convert litres into millilitres, we multiply by **1000**
5. To convert millilitres into litres, we divide by **1000**

MCQ

1. (c) $2\text{ l } 300\text{ ml}$
2. (b) 250 ml
3. (c) 9 litres



GEOMETRICAL SHAPES

Task - 1

1. Name the Shapes and Their Examples

No.	Shape	Name	Example
1	Cube	Cube	Dice, ice cube
2	Cuboid	Cuboid	Brick, matchbox
3	Oval/Ellipse	Oval	Egg, mirror
4	Circle	Circle	Coin, wheel
5	Rectangle	Rectangle	Door, book
6	Square	Square	Tile, chessboard
7	Triangle	Triangle	Sandwich, ruler
8	Cylinder	Cylinder	Tin can, pipe
9	Cone	Cone	Ice cream cone, party hat

Let's Do 10.1

Identify the following shapes:

No.	Object	Shape
1	Football	Oval
2	Clipboard	Rectangle
3	Hanger	Triangle
4	Clock	Square
5	₹500 note	Rectangle

6	Bangle	Circle
7	Mirror frame	Rectangle
8	Window	Square
9	Sandwich	Triangle

Task-2

1. Fill in the Blanks:

	Cube	Cuboid	Cone	Cylinder	Sphere
(a) Faces	6	6	1	3	1
(b) Edges	12	12	1	2	0
(c) Corners	8	8	1	0	0

2. Match the Following:

(a) Tin can	(iv) Cylinder
(b) Ice cream cone	(iii) Cone
(c) Dice	(i) Cube
(d) Globe	(v) Sphere
(e) Book	(ii) Cuboid

Task-3

1. Continue the Series:

(a) Square, Circle, Circle, Square, Circle	→ Square
(b) Triangle, Rectangle, Triangle	→ Rectangle
(c) Rectangle, Triangle, Circle, Square, Rectangle	→ Triangle
(d) Square, Triangle, Rectangle, Square	→ Triangle

Let's Revise

1. Point	2. Position	3. Line	4. Both directions
5. $\leftrightarrow$	6. Two	7. Four	8. Three
9. Zero	10. 3-D	11. Six	12. Four
13. Twelve			

MCQ

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



TIME AND CALENDAR

Task - 1

1. Write the time in the given clocks in two ways.

(b) 1 : 40 (1 hour , 40 minutes)	(c) 4 : 55 (4 hour, 55 minutes)
(d) 9 : 20 (9 hour, 20 minute)	(e) 7 : 25 (7 hour, 25 minutes)
(f) 5 : 35 (5 hour, 35 minute)	

Let's Revise (Fill in the blanks)

- 1 day = **24** hours.
- 1 hour = **60** minutes.
- 1 minute = 60 seconds.
- Time from 12 o'clock night to 12 o'clock noon = **AM**.
- Time from 12 o'clock noon to 12 o'clock night = **PM**.
- The small/short hand shows **hours**.
- The long hand shows **minutes**.
- The thin long hand shows **seconds**.
- 10 o'clock in the morning = **10:00 AM**.
- 10 o'clock at night = **10:00 PM**.
- Half past two = **2:30**.
- Quarter to three = **2:45**.
- Quarter past five = **5:15**.
- First month of the year = **January**.
- Last month of the year = **December**.
- October is the **10th** month of the year.
- April has **30** days.
- Third month = **March**.
- June has **30** days.
- February has **28 or 29** days.
- There are **365** days in a year.
- There are **366** days in a leap year.

MCQ:

- (b) 4 hours
- (d) 30 minutes
- (c) 480 seconds
- (d) 8, 15, 22, 29



MONEY

Task - 1

Total amount in each row

S.No.	Notes & Coins	Total
1.	₹20 + ₹5 + ₹5 + ₹2 + ₹2 + ₹1₹	₹35
2.	₹10 + ₹5 + ₹5 + ₹2 + ₹1 + ₹1₹	₹24
3.	₹50 + ₹10 + ₹5 + ₹2 + ₹2	₹69
4.	₹200 + ₹2 + ₹2 + ₹5 + ₹1 + ₹1	₹211
5.	₹500 + ₹5 + ₹5 + ₹2 + ₹2 + ₹1	₹515

Task 2:**1 — Complete the bill:**

Item	Cost/item	No.	Total
Book	₹55	1	₹55
Bag	₹250	1	₹250
Pen	₹10	1₹	10
Grand Total			₹315

2. Bill for 1 bag, 1 exercise book, 2 pens:

Item	Cost/item	No.	Total
Bag	₹250	1₹	250
Exercise book	₹60	1	₹60
Pens	₹10	2	₹20
Grand Total			₹330

Task 3: Convert into paise

- | | |
|--------------------------|--------------------------|
| 1. ₹19.55 = 1955 paise | 2. ₹38.00 = 3800 paise |
| 3. ₹158.25 = 15825 paise | 4. ₹15.08 = 1508 paise |
| 5. ₹80.00 = 8000 paise | 6. ₹136.75 = 13675 paise |

Let's Do

- ₹10 + ₹10 + ₹100 + ₹50 = ₹170
- Toy costs ₹25, needs ₹8 more → Arjun has = 25 - 8 = ₹17
- ₹25.50 + ₹50.25 = ₹75.75
- Apples ₹85.50 + Bananas ₹50.55 = ₹136.05; Change = ₹200.00 - ₹136.05 = ₹63.95

Let's Revise:

- Money is measured in **rupees** and **paise**.
- One rupee = **100** paise.
- 1 rupee = **10** ten-paise.
- 1 rupee = **2** fifty-paise.
- 1 rupee = **5** twenty-paise.

MCQ

- | | | |
|------------|---------------|-------------|
| 1. (a) ₹60 | 2. (d) ₹38.08 | 3. (b) ₹552 |
|------------|---------------|-------------|

**MODEL TEST PAPER - 1****1. Write in words:**

- 9,846 → Nine thousand eight hundred and forty-six
- 54,215 → Fifty-four thousand two hundred and fifteen

2. Write in numerals:

- Four thousand five hundred and sixty-two → 4,562

(b) Nine thousand one hundred and fifteen $\rightarrow$ 9,115

3. Find the missing digits:

(a) $3024 + 1492 = 5316 \rightarrow$ Missing digits: 0, 4, 1, 9

(b) $2318 + 1017 = 4035 \rightarrow$ Missing digits: 3, 8, 1, 1

(c) $1214 + 2153 = 3667 \rightarrow$ Missing digits: 1, 1, 1, 3

4. Fill in the blanks:

(a) Addition (b) Ones place onwards (c) 9,999 (d) 500

5. Garden trees:

(a) Palm + Mango = $365 + 582 = 947$ (b) Palm + Guava = $365 + 549 = 914$

(c) Mango + Guava = $582 + 549 = 1,131$

6. Runs difference = $6342 - 5982 = 360$ more runs



MODEL TEST PAPER - 2

1. Find the sum:

(a) $336 \text{ km } 553 \text{ m} + 351 \text{ km } 325 \text{ m} = 687 \text{ km } 878 \text{ m}$

(b) $176 \text{ kg } 585 \text{ g} + 221 \text{ kg } 300 \text{ g} = 397 \text{ kg } 885 \text{ g}$

(c) $285 \text{ l } 406 \text{ ml} + 393 \text{ l } 632 \text{ ml} = 679 \text{ l } 38 \text{ ml}$

2. Find the difference:

(a) $455 \text{ km } 589 \text{ m} - 153 \text{ km } 451 \text{ m} = 302 \text{ km } 138 \text{ m}$

(b) $359 \text{ kg } 638 \text{ g} - 332 \text{ kg } 623 \text{ g} = 27 \text{ kg } 15 \text{ g}$

(c) $755 \text{ l } 467 \text{ ml} - 678 \text{ l } 390 \text{ ml} = 77 \text{ l } 77 \text{ ml}$

3. Fill in the blanks:

(a) $2 \text{ km } 500 \text{ m} = 2500 \text{ m}$ (b) $3 \text{ m } 50 \text{ cm} = 350 \text{ cm}$

(c) $4 \text{ kg } 250 \text{ g} = 4250 \text{ g}$ (d) $51 \text{ l } 100 \text{ ml} = 51100 \text{ ml}$

4. Name the shapes:

(a) Cube — examples: dice, sugar cube

(b) Cuboid — examples: brick, matchbox

(c) Cone — examples: ice cream cone, traffic cone

(d) Cylinder — examples: tin can, pipe

5. Dipika is at school from 8:00 am to 12:00 noon = 4 hours

6. Money Arjun has = $\text{₹}25 - \text{₹}8 = \text{₹}17$



NUMERATION

TASK -1

1. Observe the abacuses:

- (a) Number: 21,031 — Twenty-one thousand and thirty-one
- (b) Number: 3,331 — Three thousand three hundred and thirty-one
- (c) Number: 54,322 — Fifty-four thousand three hundred and twenty-two

2. Represent on abacus (beads to draw):

- (a) 62,323 → TTh=6, Th=2, H=3, T=2, O=3
- (b) 4,05,206 → TTh=4, Th=0, H=5, T=0, O=6
- (c) 80,005 → TTh=8, Th=0, H=0, T=0, O=5

Task-2

1. Number names (Indian System):

- (a) 78,56,521 → Seventy-eight lakh fifty- six thousand five hundred and twenty-one
- (b) 99,90,090 → Ninety-nine lakh ninety thousand and ninety
- (c) 4,06,055 → Four lakh six thousand and fifty-five

2. Rewrite using number names:

- (a) Six lakh six thousand eight hundred and sixty-five people visited the science exhibition.
- (b) Four lakh fifty thousand six hundred is the population of the town.
- (c) A property dealer sold the land for Six lakh thirty thousand rupees.

Let's Do 1.1

1. Number names (International System):

- (a) 600,534 → Six hundred thousand five hundred thirty-four
- (b) 504,008,630 → Five hundred four million eight thousand six hundred thirty
- (c) 843,060,063 → Eight hundred forty-three million sixty thousand sixty-three

2. Rewrite using number names (International System):

- (a) three hundred eighty-four thousand four hundred km.
- (b) Four million five hundred five thousand eight hundred seventy

Task-3

1. 100 thousands = 1 lakh
2. 10 lakhs = 1 million
3. 50 millions = 5 crores
4. 800 thousands = 8 lakhs

Let's Do 1.2 (Image 5)

1. Place value of underlined digit:

- (a) 43, 24, 618 → underlined = 24 (twenty-four thousands place) → Place value = 24,000
- (b) 61, 46, 263 → underlined = 61 (ten lakhs) → Place value = 61,00,000
- (c) 96, 24, 802 → underlined = 8 (hundreds) → Place value = 800
- (d) 14, 00, 305 → underlined = 14 (ten lakhs) → Place value = 14,00,000

2. Reading the place value chart:

(i) = 3,504 | (ii) = 76,821 | (iii) = 93,240 | (iv) = 5,42,337

- (a) Place value of 5 in 3504 = 500
- (b) Face value of 6 in 76,821 = 6
- (c) Place value of 3 in 93,240 = 3,000
- (d) Face value of 5 in 5,42,337 = 5

3. Place values of both 4s in 4,32,415:

First 4 (lakhs place) = 4,00,000

Second 4 (tens place) = 40

4. In 8,63,620: 6 on the left is in ten-thousands place = 60,000; 6 on the right is in hundreds = 600 → 100 times greater

Task-4

1. Fill in the blanks:

- (a) 57,136 = 5 ten thousands + 7 thousands + 1 hundreds + 3 tens + 6 ones
- (b) 3,62,310 = 3 lakhs + 6 ten thousands + 2 thousands + 3 hundreds + 1 ten + 0 ones
- (c) 40,000 + 5,000 + 800 + 70 + 1 = 45,871
- (d) $(5 \times 10,000) + (8 \times 1000) + (3 \times 100) + (2 \times 10) + 1 = 58,321$

2. Expanded form:

- (a) 34,265 = 30,000 + 4,000 + 200 + 60 + 5
- (b) 8,20,052 = 8,00,000 + 20,000 + 0 + 0 + 50 + 2
- (c) 30,405 = 30,000 + 0 + 400 + 0 + 5
- (d) 3,21,435 = 3,00,000 + 20,000 + 1,000 + 400 + 30 + 5

3. Standard form:

- (a) 80,000 + 5,000 + 400 + 50 + 2 = 85,452
- (b) 9,000 + 400 + 40 + 6 = 9,446
- (c) $(7 \times 1,00,000) + (9 \times 10) + 9 = 7,00,099$

Computational Thinking Puzzle:

Let hundreds digit = h; thousands = 2h; tens = 3h

All digits different, sum = 20

Let ones = o: $2h + h + 3h + o = 20 \rightarrow 6h + o = 20$

Try $h = 3$: thousands=6, hundreds=3, tens=9, ones=2

$\rightarrow$ digits: 6,3,9,2 $\rightarrow$ sum = 20

Answer: 6,3924.

Let's Do 1.3

1. Compare:

(a) **43,24,118 < 44,24,118**

TL	L	T TH	TH	H	T	O
4	3	2	4	1	1	8
4	4	2	4	1	1	8

$\rightarrow 43,24,118 < 44,24,118$

(b) **64,38,005 > 64,28,005**

TL	L	T TH	TH	H	T	O
6	4	3	8	0	0	5
6	4	2	8	0	0	5

$\rightarrow 64,38,005 > 64,28,005$

2. Ascending order:

(a) $5,636 < 6,532 < 15,000 < 15,007 < 1,30,000$

(b) $20,111 < 22,022 < 22,200 < 22,201 < 2,00,200$

3. Descending order:

(a) $3,44,326 > 3,24,165 > 2,56,513 > 2,34,561 > 23,436$

(b) $51,890 > 50,800 > 50,360 > 48,520 > 41,7257$.

Task-5

1. Digits given: 3, 8, 1, 7, 0, 4

(a) Smallest six-digit number = 1,03,478

(b) Largest six-digit number = 8,74,310

(c) Largest ending in odd number = 8,74,301

2. Predecessor/Successor table:

Predecessor	Number	Successor
4,32,933	4,32,934	4,32,935
9,09,008	9,09,009	9,09,010
1,99,999	2,00,000	2,00,001

Task-6

1. Round to nearest 100:

(a) $1,72,118 \rightarrow 18 < 50 \rightarrow 1,72,100$

(b) $1,68,384 \rightarrow 84 > 50 \rightarrow 1,68,400$

(c) $2,35,623 \rightarrow 23 < 50 \rightarrow 2,35,600$

2. Round to nearest 1000:

- (a) $7,29,516 \rightarrow 516 > 500 \rightarrow 7,30,000$
(b) $3,45,325 \rightarrow 325 < 500 \rightarrow 3,45,000$
(c) $6,01,345 \rightarrow 345 < 500 \rightarrow 6,01,000$

Let's Do 1.4

1. Hindu-Arabic numbers:

- (a) XXXVII = 37 (b) X = 10 (c) XIV = 14 (d) XXII = 22

2. Right (R) or Wrong (W):

- (a) III $\rightarrow$ R (b) VV $\rightarrow$ W (c) XX $\rightarrow$ R (d) XVV $\rightarrow$ W

3. Fill with >, < or =:

- (a) V < X (b) XVI > XIV (c) IX = IX (d) VII < VIII

4. Add and write in Roman numerals:

- (a) V + VI = 11 = XI (b) III + XV = 18 = XVIII
(c) IX + VII = 16 = XVI (d) III + XX = 23 = XXIII

Task-7 (Image 13)

1. Continue counting:

- (a) Count by 10: 5630, 5640, 5650, 5660, 5670, 5680
(b) Count by 50: 11300, 11350, 11400, 11450, 11500, 11550

Let's Revise

1. Place value chart:

Number	TL	L	T Th	Th	H	T	O
(a) 12,35,646:	—	1	2	35	6	4	6
(b) 24,83,216:	0	2	4	83	2	1	6

2. Number 4320535:

Indian: Forty-three lakh twenty thousand five hundred and thirty-five

International: Four million three hundred twenty thousand five hundred thirty-five

3. Expanded forms:

- (a) $25,63,426 = 20,00,000 + 5,00,000 + 60,000 + 3,000 + 400 + 20 + 6$
(b) $40,30,005 = 40,00,000 + 30,000 + 0 + 0 + 0 + 5$

4. Standard forms:

- (a) $30,00,000 + 2,00,000 + 40,000 + 3,000 + 600 + 20 = 32,43,620$
(b) $40,00,000 + 30,000 + 6,000 + 800 + 10 + 9 = 40,36,819$

5. Compare:

- (a) $45,627 < 45,800$ (b) $77,594 < 78,888$ (c) $3,74,582 > 76,877$

6. Fill with >, < or =:

- (a) $25 > \text{XIX} (19)$ (b) $\text{XXX} (30) < 32$ (c) $\text{XX} (20) = 20$

MCQ

1. (a) 6 2. (c) 6 3. (d) 58,560 4. (d) hundreds



ADDITION

Let's Start

$$24,560 + 12,438 = ?$$

$$24,560 + 12,438 = 36,998$$

36,998 people visited the Trade Fair on two days.

Let's Do 2.1

1. Add:

$$(a) 44,349 + 21,128 + 42,384 = 1,07,861$$

$$(b) 31,889 + 26,046 + 41,027 = 98,962$$

$$(c) 73,131 + 16,842 + 13,278 = 1,03,251$$

2. Add the following:

$$(a) 1,01,091 + 4,42,105 + 2,06,947 = 7,50,143$$

$$(b) 3,15,910 + 2,23,777 + 1,04,661 = 6,44,348$$

$$(c) 44,82,27 + 17,02,14 + 12,00,11 = 73,84,52$$

3. Find the sum of:

$$(a) 1,23,457 + 84,320 = 2,07,777$$

$$(b) 32,625 + 1,096 + 53,002 = 86,723$$

Task-1

1. Add (fill missing digits):

$$(a) 4,32,543 + 2,50,187 + 1,20,884 = 8,03,614$$

$$(b) 3,59,312 + 1,79,826 + 454 = 5,39,592$$

$$(c) 24,075 + 21,745 + 63,882 = 1,09,702$$

2. Which number is:

$$(a) 274 \text{ more than } 15,742 = 16,016$$

$$(b) 73 \text{ more than } 16,787 = 16,860$$

Task-2

1. Fill in the blanks:

$$1. 3265 + 0 = 3265$$

$$2. 5333 + 0 = 5333$$

$$3. 75326 + 0 = 75326$$

$$4. 9999 + 1 = 10,000$$

$$5. 74380 + 20 = 74400$$

$$6. 1776 + 200 = 1976$$

$$7. 711 + 9 = 720$$

$$8. 99 + 129 + 1 = 229$$

$$9. 563 + 981 + 410 = 981 + 410 + 563$$

$$10. 6138 + 829 = 829 + 6138$$

$$11. 5649 + 63261 = 63261 + 5649$$

Let's Do 2.2

$$1. 42,460 + 62,510 + 82,168 = 1,87,138 \text{ tourists}$$

$$2. ₹42,180 + ₹41,000 + ₹52,545 = ₹1,35,725$$

$$3. ₹4,16,400 + ₹3,24,100 + ₹32,000 + ₹6,36,500 = ₹14,09,000$$

4. $21,623 + 24,526 = 46,149$ children
5. $6,95,860 + 7,25,654 = 14,21,514$ visitors

Task-3:

1. Best estimate & Actual sum:

- (a) $424 + 395 \rightarrow$ Best estimate: $400 + 400 = 800$ | Actual = 819
(b) $1020 + 998 \rightarrow$ Best estimate: $1000 + 1000 = 2000$ | Actual = 2018
(c) $32506 + 4816 \rightarrow$ Best estimate: $30000 + 5000 = 35000$ | Actual = 37,322

Let's Revise —

1. Add:

- (a) $4063 + 1732 = 5,795$ (b) $9463 + 1832 = 11,295$
(c) $7083 + 6735 = 13,818$

2. Fill in the blanks:

- (a) $25,126 + 0 = 25,126$
(b) Numbers being added are called addends
(c) Greatest 6-digit number + 1 = 10,00,000

4. $\text{₹}2,84,500 + \text{₹}1,63,000 = \text{₹}4,47,500$

MCQ:

1. (d) 75 2. (b) 16784 3. (b) 3230



SUBTRACTION

Let's Do 3.1

1. Perform the following subtractions:

- (a) $78,869 - 61,354 = 17,515$ (b) $72,549 - 30,137 = 42,412$
(c) $99,999 - 67,525 = 32,474$ (d) $9,46,000 - 6,35,183 = 3,10,817$
(e) $8,00,000 - 6,57,321 = 1,42,679$ (f) $50,0892 - 26,9129 = 23,1763$

2. Find the difference:

- (a) $36,821 - 14,240 = 22,581$
(b) $9,03,265 - 6,31,492 = 2,71,773$

3. Which number is:

- (a) $8888 - 1234 = 7,654$ (b) $4832 - 100 = 4,732$
(c) $60000 - 9099 = 50,901$ (d) $10000 - 36 = 9,964$

Task 2

1. Find the missing subtrahend:

- (a) $9,46,000 - 1,78,214 = 7,67,786$
(b) $8,87,245 - 3,50,862 = 5,36,383$

(c) $8,24,536 - 7,10,659 = 1,13,877$

2. Find the missing minuend:

(a) $3,55,728 + 2,14,000 = 5,69,728$

(b) $27,6411 + 6,5043 = 34,1454$

(c) $52,6005 + 24,1438 = 76,7443$

3. Fill in the blanks:

(a) $52,165 - 52,165 = 0$

(b) $63,242 - 63,242 = 0$

(c) $48,916 - 48,916 = 0$

(d) $61,821 - 0 = 61,821$

(e) $3,643 - 1 = 3,642$

(f) $10,000 - 1 = 9,999$

4. What must be added to 1,162 to get 32,153?

$32,153 - 1,162 = 30,991$

5. What must be subtracted from 63,148 to get 456?

$63,148 - 456 = 62,692$

6. Subtract 5,326 from the sum of 3,211 and 5,015.

Sum = $3,211 + 5,015 = 8,226$

$8,226 - 5,326 = 2,900$

Let's Do 3.2

1. Arun's flat (₹6,36,000) is more costly.

Difference = $6,36,000 - 3,73,000 = ₹2,63,000$

2. Smaller number = $6,14,893 - 18,489 = 5,96,404$

3. Money left = $48,635 - 33,296 = ₹15,339$

4. Books not in English = $65,348 - 23,067 = 42,281$ books

5. Candidate A's votes = $8,85,765 - 2,458 = 8,83,307$ votes

Let's Do 3.3

1. Money Shweta has = $25,306 + 5,632 - 3,284 = 30,938 - 3,284 = ₹27,654$

2. Children = $5,450 - 1,265 - 1,150 = 5,450 - 2,415 = 3,035$ children

3. Other subject books = $82,300 - 32,418 - 16,258 = 82,300 - 48,676 = 33,624$ books

4. Tuesday: 45,325 kg Wednesday: $45,325 + 845 = 46,170$ kg

Thursday: $45,325 - 823 = 44,502$ kg

Total = $45,325 + 46,170 + 44,502 = 1,35,997$ kg

Added water: + 550 ml

Total before spill: 1020 ml

Spilled water: - 250ml

Remaining: 770 ml

Let's Revise

1. Subtract:

(a) $3,484 - 1,361 = 2,123$

(b) $7,825 - 3,013 = 4,812$

(c) $6,445 - 2,692 = 3,753$

2. Fill in the blanks:

- (a) Minuend – Subtrahend = Difference
- (b) Zero (0) added to any number gives the number itself
- (c) If we subtract a number from its successor, we get 1
- (d) $43,210 - 0 = 43,210$
- (e) $8,32,654 + 3 = 8,32,657$
- (f) $48,321 - 48,321 = 0$
- (g) Smallest 6-digit number – 1 = $1,00,000 - 1 = 99,999$
- (h) $6,83,246 - 0 = 6,83,246$

MCQ

1. (a) 4 2. (c) 258 3. (b) 909



MULTIPLICATION

Task-1

1. Fill in the blanks:

- (a) $4,326 \times 1 = 4,326$
- (b) $(40 + 4) \times 3 = 44 \times 3 = 132$
- (c) $5,263 \times 0 = 0$
- (d) $713 \times 265 = 265 \times 713$
- (e) $1,176 \times (324 \times 23) = 324 \times (1,176 \times 23)$

2. Fill in the blanks:

- (a) $23 \times 10 = 230$
- (b) $625 \times 100 = 62,500$
- (c) $432 \times 100 = 43,200$
- (d) $185 \times 1,000 = 1,85,000$

3. Write the product:

- (a) $24 \times 200 = 4,800$
- (b) $15 \times 40 = 600$
- (c) $35 \times 700 = 24,500$
- (d) $801 \times 200 = 1,60,200$

4. Find the product:

- (a) $14 \times 4,000 = 56,000$
- (b) $143 \times 3,000 = 4,29,000$
- (c) $7,000 \times 32 = 2,24,000$
- (d) $3,000 \times 119 = 3,57,000$

Task-2

- (a) Multiplying any number by 2 always gives an Even answer.
- (b) Answer: (i) 906
- (c) Odd $\times$ Even = Even
- (d) (iv) 3,580

2. Complete multiplication grids:

- (a) Products are 15, 24, 12 / 20, 32, 16 / 30, 48, 24

Column headers: 8, 12 (since rows differ by factor)

Row multipliers: 3, 4, 6 $\rightarrow$ Top row: $\times$ | 3 | 4 | 6 — Column headers: 5, 8, 4

Actually: $15=3\times 5$, $24=3\times 8$, $12=3\times 4 \rightarrow$ rows: 3,4,6; columns: 5,8,4

7× table : 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

8× table : 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96

9× table : 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, 108

10× table : 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120

11× table : 11, 22, 33, 44, 55, 66, 77, 88, 99, 110, 121, 132

12× table : 12, 24, 36, 48, 60, 72, 84, 96, 108, 120, 132, 144

(b) 8, 0, 56 / 4, 0, 28 / 3, 0, 21

Middle column is all 0 $\rightarrow$ column header = 0

8,4,3 suggest rows $\times$ col1; $56=8\times 7$, $28=4\times 7$,

$21=3\times 7 \rightarrow$ columns: 1, 0, 7; rows: 8, 4, 3

(c) 12,36,16 / 21,63,28 / 3,9,4

$12=3\times 4$, $36=3\times 12$, $16=? \rightarrow$ rows: 4,7,1; columns: 3,9,4

Let's Do 4.1

1. Find the product:

(a) $321 \times 123 = 39,483$

(b) $423 \times 205 = 86,715$

(c) $213 \times 34 = 7,242$

(d) $6,394 \times 25 = 1,59,850$

(e) $3,001 \times 712 = 21,37,112$

(f) $6,443 \times 503 = 32,40,829$

2. Multiply (words to numbers):

(a) $217 \times 502 = 217\times 500 + 217\times 2 = 1,08,500 + 434 = 1,08,934$

(b) $640 \times 140 = 89,600$

(c) $1,335 \times 215 = 1335\times 200 + 1335\times 15 = 2,67,000 + 20,025 = 2,87,025$

3. Find the product:

(a) $6 \times 3 \times 14 = 18 \times 14 = 252$

(b) $269 \times 0 \times 73 = 0$

(c) $6 \times 4 \times 11 \times 130 = 34,320$

(d) $130 \times 11 \times 202 = 2,88,860$

4. Find product by easy rearrangement:

(a) $2 \times 18 \times 50 = (2\times 50) \times 18 = 1,800$

(b) $4 \times 325 \times 25 = (4\times 25) \times 325 = 32,500$

(c) $2 \times 50 \times 100 = 10,000$

(d) $8 \times 114 \times 25 = (8\times 25) \times 114 = 22,800$

Let's Do 4.2

1. $800 \times 85 = ₹68,000$

2. $258 \times 12 = ₹3,096$

3. $75 \times 25 = 1,875$ trees

4. $40 \times 240 = 5,760$ potato plants

5. $240 \times 15 = ₹3,600$

6. A shopkeeper sells 48 pens at ₹15 each. Total = $48 \times 15 = ₹720$

Let's Revise:

1. Fill in the blanks:

(a) $3 \times 300 = 900$

(b) $4,583 \times 0 = 0$

(c) $12 \times 9000 = 1,08,000$

(d) $432 \times 251 = 251 \times 432$

2. Find the product:

- (a) $613 \times 505 = 3,09,565$ (b) $8,946 \times 130 = 11,62,980$
(c) $4,823 \times 789 = 38,05,347$
(d) $6,080 \times 250 = 15,20,000$

3. Find the product:

- (a) $1 \times 15 = 15$ (b) $0 \times 35 = 0$
(c) $413 \times 0 = 0$ (d) $540 \times 1 = 540$ 5. $\text{₹}125 \times 9 = \text{₹}1,125$

4. Find the product:

- (a) $425 \times 6 = 2,550$ (b) $314 \times 8 = 2,512$
(c) $442 \times 31 = 13,702$ (d) $1304 \times 5 = 6,520$

5. Missing numbers:

- (a) $(4 \times 4) + \square = 23 \rightarrow 16 + \square = 23 \rightarrow \square = 7$
(b) $(10 \times 6) + \square = 80 \rightarrow 60 + \square = 80 \rightarrow \square = 20$
(c) $(11 \times 10) + \square = 120 \rightarrow 110 + \square = 120 \rightarrow \square = 10$
(d) $(2 \times 13) - \square = 20 \rightarrow 26 - \square = 20 \rightarrow \square = 6$

MCQ

1. (c) $9 \times (7 + 5)$
2. $83 \times 36 = 35,388 \rightarrow$ rounded to nearest 100 = 35,400 $\rightarrow$ closest is (b) 35,200
3. (c) 3, 9 4. (a) 8



DIVISION

Let's Start

- Case 1: $192 \div 3 = 64$ rows
Case 2: $192 \div 6 = 32$ rows
Case 3: $192 \div 8 = 24$ rows

Task-1

1. Find the dividends:

- (a) $35 \div 5 = 7$ (b) $27 \div 3 = 9$
(c) $64 \div 4 = 16$ (d) $108 \div 12 = 9$

2. Find the divisors:

- (a) $50 \div 5 = 10$ (b) $36 \div 9 = 4$ (c) $64 \div 16 = 4$ (d) $147 \div 21 = 7$

3. Fill in the blanks:

- (a) $56 \div 1 = 56$ (b) $0 \div 372 = 0$ (c) $413 \div 413 = 1$
(d) If divisor is 1, quotient = the dividend.
(e) The remainder is always smaller than the divisor.
(f) If dividend is zero, quotient is also zero.

Let's Do 5.1

1. Divide and check:

- | | |
|-----------------------------------|----------------------------------|
| (a) $1089 \div 8 = Q: 136, R: 1$ | (b) $453 \div 31 = Q: 14, R: 19$ |
| (c) $1000 \div 24 = Q: 41, R: 16$ | (d) $599 \div 11 = Q: 54, R: 5$ |
| (e) $619 \div 17 = Q: 36, R: 7$ | (f) $768 \div 48 = Q: 16, R: 0$ |

2. Quotient and remainder:

- | | |
|------------------------------------|-----------------------------------|
| (a) $2363 \div 42 = Q: 56, R: 11$ | (b) $4580 \div 54 = Q: 84, R: 44$ |
| (c) $1581 \div 51 = Q: 31, R: 0$ | (d) $5078 \div 43 = Q: 118, R: 4$ |
| (e) $4562 \div 42 = Q: 108, R: 26$ | |
| (f) $4446 \div 31 = Q: 143, R: 13$ | |

3. Divide, find Q & R, verify:

- | | |
|-------------------------------------|-------------------------------------|
| (a) $4138 \div 25 = Q: 165, R: 13$ | (b) $23291 \div 41 = Q: 568, R: 3$ |
| (c) $56952 \div 87 = Q: 654, R: 54$ | (d) $8848 \div 24 = Q: 368, R: 16$ |
| (e) $24408 \div 36 = Q: 678, R: 0$ | (f) $11783 \div 18 = Q: 654, R: 11$ |

Let's Do 5.2

1. Quotient and remainder:

- | | |
|-------------------------------------|---------------------------------------|
| (a) $3440 \div 572 = Q: 6, R: 8$ | (b) $3821 \div 245 = Q: 15, R: 146$ |
| (c) $8765 \div 192 = Q: 45, R: 125$ | (d) $36,814 \div 842 = Q: 43, R: 728$ |

2. Find the dividend ($D = \text{Divisor} \times Q + R$):

- (a) $125 \times 120 + 0 = 15,000$
(b) $532 \times 228 + 156 = 121,452 + 156 = 1,21,452$
(c) $261 \times 43 + 83 = 11,223 + 83 = 11,306$

Task-2

1. Fill in the blanks:

- | | |
|--------------------------|--------------------------|
| (a) $4300 \div 10 = 430$ | (b) $460 \div 10 = 46$ |
| (c) $3200 \div 100 = 32$ | (d) $8000 \div 1000 = 8$ |

2. Quotient and Remainder:

- (a) $4,20,000 \div 1000: Q = 420, R = 0$
(b) $3625 \div 100: Q = 36, R = 25$
(c) $1,30,002 \div 100: Q = 1300, R = 2$

Task-3

1. Approximate totals (round to nearest 10):

- | | |
|---------------------------------------|---------------------------------------|
| (a) $36+72+24 \approx 40+70+20 = 130$ | (b) $43+38+24 \approx 40+40+20 = 100$ |
| (c) $92+31+86 \approx 90+30+90 = 210$ | (d) $72+37+49 \approx 70+40+50 = 160$ |

2. Subtract mentally:

- | | |
|-----------------------|---------------------------|
| (a) $568 - 342 = 226$ | (b) $168 - 85 = 83$ |
| (c) $93 - 27 = 66$ | (d) $283 + 58 + 24 = 365$ |

Task-4 (BODMAS/DMAS order)

1. $701 + 570 \div 19 - 15 \text{ of } 8 = 701 + 30 - 120 = 611$
2. $438 \times 71 - 630 \div 21 = 31,098 - 30 = 31,068$
3. $54 \div 6 \times 70 + 110 = 9 \times 70 + 110 = 630 + 110 = 740$
4. $6000 + 9000 \div 500 \text{ of } 6 - 2000 = 6000 + 9000 \div 3000 - 2000 = 6000 + 3 - 2000 = 4,003$
5. $220 + 24 \times 60 - 1089 \div 99 = 220 + 1440 - 11 = 1,649$
6. $432 \div 432 \times 364 - 364 = 1 \times 364 - 364 = 0$

Let's Revise:

1: Fill in the blanks:

- | | |
|---------------------------------------|--------------------------|
| (a) $3745 \times 81 = 81 \times 3745$ | (b) $5252 \div 1 = 5252$ |
| (c) $6325 \times 0 = 0$ | (d) $635 \times 1 = 635$ |

2 (True/False):

- (a) $415 \times 100 = 4150 \rightarrow \text{False} (= 41,500)$
(b) $25,000 \div 1000 = 250 \rightarrow \text{False} (= 25)$
(c) $0 \times 10 = 0 \rightarrow \text{True}$
(d) $77,210 \div 10 = 7,72,100 \rightarrow \text{False} (= 7,721)$

3. Quotient and remainder:

- (a) $60,03,137 \div 1000$: Q = 6003, R = 137
(b) $78,096 \div 1000$: Q = 78, R = 96
(c) $50,123 \div 100$: Q = 501, R = 23
(d) $736 \div 10$: Q = 73, R = 6

4. Divide and check:

- (a) $4,93,265 \div 83$: Q = 5942, R = 39 (b) $6,06,060 \div 62$: Q = 9775, R = 50

MCQ:

1. (d) 21 2. (c) 48 3. (b) 510



MULTIPLES AND FACTORS

Task-1

1. Next five multiples:

- (a) 7, 14, 21, 28, 35, 42, 49, 56 (b) 8, 16, 24, 32, 40, 48, 56, 64
2. (a) First four multiples of 6: 6, 12, 18, 24
(b) First six multiples of 3: 3, 6, 9, 12, 15, 18
(c) First five multiples of 8: 8, 16, 24, 32, 40
(d) First three multiples of 11: 11, 22, 33

3. Common multiples of 3 and 6:

Number	Common multiple?	Multiplication fact
(a) 12Yes	$3 \times 4 = 12$,	$6 \times 2 = 12$
(b) 21No	(not a multiple of 6)—	
(c) 36Yes	$3 \times 12 = 36$,	$6 \times 6 = 36$

4. Common multiples of 6 and 9:

Number	Common multiple?	Multiplication fact
(a) 36	Yes	$6 \times 6 = 36$, $9 \times 4 = 36$
(b) 54	Yes	$6 \times 9 = 54$, $9 \times 6 = 54$
(c) 60	No (not a multiple of 9)	—

Task-2

1. Write the factor Pairs (Rectangles)

- (a) Blue rectangle (1 row $\times$ 5 cols): 1, 5
- (b) Pink rectangle (2 rows $\times$ 4 cols): 2, 4
- (c) Green rectangle (3 rows $\times$ 3 cols): 3, 3

Let's Do 6.1

1. Is the second number a factor of the first?

- (a) $20, 5 \rightarrow 20 \div 5 = 4 \rightarrow Y$
- (b) $33, 11 \rightarrow 33 \div 11 = 3 \rightarrow Y$
- (c) $24, 10 \rightarrow 24 \div 10 = 2.4 \rightarrow N$
- (d) $63, 5 \rightarrow 63 \div 5 = 12.6 \rightarrow N$
- (e) $50, 7 \rightarrow 50 \div 7 \approx 7.1 \rightarrow N$
- (f) $17, 1 \rightarrow 17 \div 1 = 17 \rightarrow Y$

2. Numbers that have 4 as a factor (from 1,3,8,12,16,21,23,24,32):

8, 12, 16, 24, 32

3. 8 is a factor of which numbers? (from 16,22,25,35,32,64):

16, 32, 64

4. List all factors:

- (a) 42: 1, 2, 3, 6, 7, 14, 21, 42
- (b) 24: 1, 2, 3, 4, 6, 8, 12, 24
- (c) 40: 1, 2, 4, 5, 8, 10, 20, 40

Task-3

1. Prime factors of 88:

- 1. $88 = 2 \times 44 = 2 \times 2 \times 22 = 2 \times 2 \times 2 \times 11$
 $\rightarrow 88 = 2^3 \times 11$
- 2. $81 = 3 \times 27 = 3 \times 3 \times 9 = 3 \times 3 \times 3 \times 3$
 $\rightarrow 81 = 3^4$
- 3. $54 = 2 \times 27 = 2 \times 3 \times 9 = 2 \times 3 \times 3 \times 3$
 $\rightarrow 54 = 2 \times 3^3$

Let's Do 6.2

1. Prime factorisation:

(a) $80 = 2^4 \times 5$ (b) $112 = 2^4 \times 7$ (c) $256 = 2^8$

2. (a) Consecutive even numbers between 61 and 71: 62, 64, 66, 68, 70

(b) First 6 multiples of 12: 12, 24, 36, 48, 60, 72

(c) Multiples of 12 between 50 and 100: 60, 72, 84, 96

(d) Prime numbers between 60 and 90: 61, 67, 71, 73, 79, 83, 89

3. Prime (P) or Composite (C):

(a) $11 \rightarrow P$ (b) $57 = 3 \times 19 \rightarrow C$ (c) $2 \rightarrow P$

(d) $17 \rightarrow P$ (e) $117 = 9 \times 13 \rightarrow C$ (f) $1 \rightarrow \text{Neither}$

Task-4

1. Divisibility by 2, 5, 10:

Number	By2	By5	By10
(a) 4326	Y	N	N
(b) 1625	N	Y	N
(c) 2540	Y	Y	Y
(d) 4327	N	N	N

2. Divisible by 3 and 9:

(a) 428: sum=14 $\rightarrow$ Neither (b) 477: sum=18 $\rightarrow$ Both 3 and 9

(c) 3012: sum=6 $\rightarrow$ By 3 only (d) 1263: sum=12 $\rightarrow$ By 3 only

3. Divisible by 4 (last two digits divisible by 4):

(a) 432640: $40 \div 4 = 10 \rightarrow$ Yes (b) 204521: $21 \div 4 = 5.25 \rightarrow$ No

(c) 3240688: $88 \div 4 = 22 \rightarrow$ Yes (d) 27314: $14 \div 4 = 3.5 \rightarrow$ No

4. Numbers between 30 and 50 divisible by:

(a) 2: 32,34,36,38,40,42,44,46,48 (b) 3: 33,36,39,42,45,48

(c) 2 and 5: 40 (d) 2 and 10: 40

Task-5

Common Factors (Venn Diagrams)

1. 16 and 48 : Factors of 16: 1,2,4,8,16

Factors of 48: 1,2,3,4,6,8,12,16,24,48 Common factors: 1, 2, 4, 8, 16

2. 36 and 54 : Factors of 36: 1,2,3,4,6,9,12,18,36

Factors of 54: 1,2,3,6,9,18,27,54 Common factors: 1, 2, 3, 6, 9, 18

3. 18 and 45 : Factors of 18: 1,2,3,6,9,18

Factors of 45: 1,3,5,9,15,45 Common factors: 1, 3, 9

Let's Do 6.3

1. HCF by finding factors:

(a) 5 & 15 $\rightarrow$ HCF = 5

(b) 20 & 30 $\rightarrow$ HCF = 10

(c) $16 \text{ \& } 32 \rightarrow \text{HCF} = 16$

(d) $23 \text{ \& } 26 \rightarrow \text{HCF} = 1$

(e) $4 \text{ \& } 10 \rightarrow \text{HCF} = 2$

(f) $30 \text{ \& } 42 \rightarrow \text{HCF} = 6$

2. HCF by prime factorisation:

(a) $45=3^2 \times 5, 35=5 \times 7 \rightarrow \text{HCF} = 5$

(b) $40=2^3 \times 5, 42=2 \times 3 \times 7, 72=2^3 \times 3^2 \rightarrow \text{HCF} = 2$

(c) $48=2^4 \times 3, 64=2^6 \rightarrow \text{HCF} = 16$

(d) $25=5^2, 40=2^3 \times 5, 64=2^6 \rightarrow \text{HCF} = 1$

(e) $50=2 \times 5^2, 105=3 \times 5 \times 7 \rightarrow \text{HCF} = 5$

(f) $112=2^4 \times 7, 128=2^7, 512=2^9 \rightarrow \text{HCF} = 16$

3. HCF by division method:

(a) $30 \text{ \& } 45 \rightarrow \text{HCF} = 15$

(b) $9 \text{ \& } 33 \rightarrow \text{HCF} = 3$

(c) $25 \text{ \& } 40 \rightarrow \text{HCF} = 5$

(d) $64 \text{ \& } 80 \rightarrow \text{HCF} = 16$

(e) $84 \text{ \& } 105 \rightarrow \text{HCF} = 21$

(f) $56 \text{ \& } 72 \rightarrow \text{HCF} = 8$

4. HCF and co-prime check (co-prime if $\text{HCF} = 1$):

(a) $14 \text{ \& } 28 \rightarrow \text{HCF}=14$, Not co-prime

(b) $12 \text{ \& } 17 \rightarrow \text{HCF}=1$, Co-prime

(c) $18 \text{ \& } 36 \rightarrow \text{HCF}=18$, Not co-prime

(d) $25 \text{ \& } 27 \rightarrow \text{HCF}=1$, Co-prime

(e) $9 \text{ \& } 13 \rightarrow \text{HCF}=1$, Co-prime

(f) $31 \text{ \& } 32 \rightarrow \text{HCF}=1$, Co-prime

Let's Do 6.4

1. HCF of 32, 40, 64: $32=2^5, 40=2^3 \times 5, 64=2^6 \rightarrow \text{HCF} = 8$

2. Greatest number dividing 33, 44, 55:

$\text{HCF}(33,44,55): 33=3 \times 11, 44=4 \times 11, 55=5 \times 11 \rightarrow \text{HCF} = 11$

3. Greatest number dividing 96 and 106 leaving remainder 6:

$96-6=90, 106-6=100 \rightarrow \text{HCF}(90,100)=10 \rightarrow \text{Answer} = 10$

4. Greatest number dividing 58, 36, 74 leaving remainders 2, 3, 4:

$58-2=56, 36-3=33, 74-4=70 \rightarrow \text{HCF}(56, 33, 70)=1$

Let's Do 6.5

1. LCM by prime factorisation:

(a) $21=3 \times 7, 63=3^2 \times 7 \rightarrow \text{LCM} = 63$

(b) $25=5^2, 80=2^4 \times 5 \rightarrow \text{LCM} = 400$

(c) $54=2 \times 3^3, 60=2^2 \times 3 \times 5, 90=2 \times 3^2 \times 5 \rightarrow \text{LCM} = 540$

(d) $16=2^4, 28=2^2 \times 7, 40=2^3 \times 5 \rightarrow \text{LCM} = 560$

(e) $112=2^4 \times 7, 168=2^3 \times 3 \times 7, 266=2 \times 7 \times 19 \rightarrow \text{LCM} = 2,128$

$(112=2^4 \times 7; 168=2^3 \times 3 \times 7; 266=2 \times 7 \times 19 \rightarrow \text{LCM}=2^4 \times 3 \times 7 \times 19=2,128)$

(f) $250=2 \times 5^3, 400=2^4 \times 5^2, 750=2 \times 3 \times 5^3 \rightarrow \text{LCM} = 6,000$

2. LCM by division method:

(a) $50, 60 \rightarrow \text{LCM} = 300$

(b) $36, 42, 148 \rightarrow \text{LCM} = 2,628$

(c) $75, 120 \rightarrow \text{LCM} = 600$

(d) $16, 18 \rightarrow \text{LCM} = 144$

(e) $10, 16, 18 \rightarrow \text{LCM} = 720$

(f) $36, 42 \rightarrow \text{LCM} = 252$

Task-6

1. **LCM and HCF of 16 and 24:** $16=2^4, 24=2^3 \times 3$ HCF = 8, LCM = 48

2. **LCM and HCF of 36 and 45:** $36=2^2 \times 3^2, 45=3^2 \times 5$ HCF = 9, LCM = 180

3. **LCM and HCF of 64 and 96:** $64=2^6, 96=2^5 \times 3$ HCF = 32, LCM = 192

Let's Revise

1. Four multiples of:

(a) 6: 6, 12, 18, 24

(b) 8: 8, 16, 24, 32

(c) 10: 10, 20, 30, 40

(d) 15: 15, 30, 45, 60

2. All factors of:

(a) 8: 1, 2, 4, 8

(b) 12: 1, 2, 3, 4, 6, 12

(c) 18: 1, 2, 3, 6, 9, 18

(d) 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

3. Common factors table:

1st number	Factors	2nd number	Factors	Common
(a) 12	1,2,3,4,6,12	16	1,2,4,8,16	1,2,4
(b) 10	1,2,5,10	30	1,2,3,5,6,10,15,30	1,2,5,10
(c) 24	1,2,3,4,6,8,12,24	36	1,2,3,4,6,9,12,18,36	1,2,3,4,6,12
(d) 14	1,2,7,14	27	1,3,9,27	1

4. Prime factors:

(a) $32 = 2^5$

(b) $64 = 2^6$

(c) $112 = 2^4 \times 7$

5. HCF and LCM of 25, 40, 75:

$25=5^2, 40=2^3 \times 5, 75=3 \times 5^2$ HCF = 5 LCM = 600

MCQ

1. (a) 1 and 2

2. (c) 84

3. (a) 3 and 4



FRACTIONS

Task-1 |

1. Three equivalent fractions for each:

(a) $3/5 = 6/10, 9/15, 12/20$

(b) $4/7 = 8/14, 12/21, 16/28$

2. Fill in the blanks:

(a) $1/3 = 6/18 = 5/15 = 4/12$

(b) $2/5 = 4/10 = 8/20 = 16/40$

Let's Do 7.1

1. Circle the proper fractions (numerator < denominator):

- (a) $\frac{1}{4}$ (b) $\frac{13}{5}$ (c) $\frac{4}{6} \rightarrow \frac{4}{6}$ (d) $\frac{5}{6}$
(e) $\frac{9}{6}$ (f) $\frac{15}{18}$

2. Circle the improper fractions (numerator $\geq$ denominator):

- (a) $\frac{7}{5}$ (b) $\frac{1}{3}$ (c) $\frac{19}{17}$ (d) $\frac{14}{3}$
(e) $\frac{9}{10}$ (f) $\frac{2}{8}$

3. Circle the unit fractions (numerator = 1):

- (a) $\frac{1}{10}$ (b) $\frac{1}{5}$ (c) $\frac{2}{8}$ (d) $\frac{1}{4}$
(e) $\frac{1}{100}$ (f) $\frac{1}{6}$

4. Circle the mixed fractions:

- (a) $\frac{15}{7}$ (b) $2\frac{3}{5}$ (c) $4\frac{3}{8}$ (d) $4\frac{7}{8}$
(e) $\frac{19}{2}$ (f) $\frac{3}{8}$

5. Change improper $\rightarrow$ mixed fractions:

- (a) $\frac{25}{7} = 3\frac{4}{7}$ (b) $\frac{37}{6} = 6\frac{1}{6}$ (c) $\frac{67}{9} = 7\frac{4}{9}$
(d) $\frac{42}{4} = 10\frac{1}{2}$

6. Change mixed $\rightarrow$ improper fractions:

- (a) $7\frac{3}{6} = \frac{45}{6}$ (b) $11\frac{1}{8} = \frac{89}{8}$ (c) $8\frac{5}{12} = \frac{101}{12}$
(d) $12\frac{1}{4} = \frac{49}{4}$

7. Change into like fractions (same denominator):

- (a) $\frac{6}{8}$ and $\frac{3}{16} \rightarrow \frac{12}{16}$ and $\frac{3}{16}$
(b) $\frac{8}{20}$ and $\frac{6}{40} \rightarrow \frac{16}{40}$ and $\frac{6}{40}$
(c) $3\frac{1}{2}$ and $\frac{6}{40} \rightarrow 3\frac{20}{40}$ and $\frac{6}{40}$
(d) $5\frac{2}{3}$ and $4\frac{9}{12} \rightarrow 5\frac{8}{12}$ and $4\frac{9}{12}$

Task-2

1. Compare (draw & colour — sign given):

- (a) $\frac{2}{8} < \frac{1}{2}$ (b) $\frac{1}{3} > \frac{1}{4}$ (c) $\frac{3}{6} = \frac{2}{4}$ (d) $\frac{6}{8} > \frac{2}{3}$

2. Compare the fractions:

- (a) $\frac{2}{3} > \frac{1}{2}$ (b) $\frac{2}{3} > \frac{1}{4}$ (c) $\frac{7}{12} > \frac{6}{13}$

3. Write correct sign (mixed fractions):

- (a) $2\frac{2}{3} < 3\frac{1}{8}$ (b) $4\frac{2}{3} > 4\frac{1}{4}$ (c) $6\frac{1}{7} > 6\frac{1}{8}$

4. Ascending order:

- (a) $\frac{1}{4}, \frac{9}{6}, \frac{7}{10}, \frac{1}{2} \rightarrow \frac{1}{4}, \frac{1}{2}, \frac{7}{10}, \frac{9}{6}$
(b) $\frac{4}{6}, \frac{4}{12}, \frac{4}{18}, \frac{4}{3} \rightarrow \frac{4}{18}, \frac{4}{12}, \frac{4}{6}, \frac{4}{3}$
(c) $\frac{1}{3}, \frac{4}{9}, \frac{5}{12}, \frac{1}{2} \rightarrow \frac{1}{3}, \frac{5}{12}, \frac{4}{9}, \frac{1}{2}$
(d) $\frac{1}{5}, \frac{4}{15}, \frac{5}{10}, \frac{7}{20} \rightarrow \frac{1}{5}, \frac{4}{15}, \frac{7}{20}, \frac{5}{10}$

5. Descending order:

(a) $7/20, 4/15, 6/10, 9/40 \rightarrow 6/10, 7/20, 4/15, 9/40$

(b) $5/9, 2/3, 2/6, 7/12 \rightarrow 2/3, 7/12, 5/9, 2/6$

(c) $2/3, 4/5, 1/2, 3/4 \rightarrow 4/5, 3/4, 2/3, 1/2$

(d) $2/7, 3/14, 7/28, 5/21 \rightarrow 2/7, 5/21, 3/14, 7/28$

6. Fractions in lowest term (GCD of num & denom = 1):

(a) $1/4 \rightarrow \text{Yes}$

(b) $2/8 \rightarrow \text{No}$

(c) $5/10 \rightarrow \text{No}$

(d) $1/8 \rightarrow \text{Yes}$

(e) $9/13 \rightarrow \text{Yes}$

7. Reduce to lowest term:

(a) $10/30 = 1/3$

(b) $55/60 = 11/12$

(c) $15/20 = 3/4$

(d) $20/80 = 1/4$

Let's Do 7.2**1. Find the Sum:**

(a) $3/6 + 5/6 = 8/6 = 1 \frac{1}{3}$

(b) $3/8 + 5/8 = 8/8 = 1$

(c) $3/8 + 5/16 = 6/16 + 5/16 = 11/16$

(d) $3/4 + 5/8 = 6/8 + 5/8 = 11/8 = 1 \frac{3}{8}$

(e) $2 \frac{1}{6} + 1 \frac{1}{3} = 2 \frac{1}{6} + 1 \frac{2}{6} = 3 \frac{3}{6} = 3 \frac{1}{2}$

(f) $5 \frac{1}{8} + 5 \frac{1}{16} = 5 \frac{2}{16} + 5 \frac{1}{16} = 10 \frac{3}{16}$

2. Add:

(a) $11/25 + 8/25 + 2/25 = 21/25$

(b) $1/10 + 3/10 + 7/10 = 11/10 = 1 \frac{1}{10}$

(c) $3 \frac{3}{4} + 4 \frac{1}{2} + 2 \frac{1}{4} = 3 \frac{3}{4} + 4 \frac{2}{4} + 2 \frac{1}{4} = 9 \frac{6}{4} = 10 \frac{1}{2}$

(d) $3/4 + 5/6 + 1/12 = 9/12 + 10/12 + 1/12 = 20/12 = 1 \frac{2}{3}$

Let's Do 7.3**1. Subtract:**

(a) $4/7 - 2/7 = 2/7$

(b) $9/12 - 5/12 = 4/12 = 1/3$

(c) $47/75 - 23/75 = 24/75 = 8/25$

2. Find:

(a) $3 - 6/8 = 24/8 - 6/8 = 18/8 = 2 \frac{1}{4}$

(b) $5 - 4/6 = 30/6 - 4/6 = 26/6 = 4 \frac{1}{3}$

(c) $7 - 2/3 = 21/3 - 2/3 = 19/3 = 6 \frac{1}{3}$

3. Simplify:

(a) $2 \frac{3}{4} - 1/2 = 2 \frac{3}{4} - 2/4 = 2 \frac{1}{4}$

(b) $3 \frac{1}{2} - 2 \frac{4}{5} = 3 \frac{5}{10} - 2 \frac{8}{10} = 2 \frac{15}{10} - 2 \frac{8}{10} = 7/10$

(c) $7 \frac{1}{4} - 1/2 = 7 \frac{1}{4} - 2/4 = 6 \frac{3}{4}$

4. Fill in the blanks:

(a) $3/5 - 0 = 3/5$

(b) $4\ 5/9 - 0 = 4\ 5/9$

(c) $11/5 - 0 = 11/5$

(d) $6/11 - 6/11 = 6/11 \rightarrow 0$

(e) $4/5 - 4/5 = 0$

(f) $13/6 - 13/6 = 0$

Let's Do 7.4

1. Simplify (same denominator — add & subtract):

(a) $5/7 + 1/7 - 3/7 = 3/7$

(b) $9/11 - 5/11 + 3/11 = 7/11$

(c) $9/13 + 5/13 + 1/13 - 10/13 = 5/13$

(d) $5/16 + 2/16 - 3/16 = 4/16 = 1/4$

2. Simplify (unlike denominators):

(a) $5/8 - 1/4 + 3/2 = 5/8 - 2/8 + 12/8 = 15/8 = 1\ 7/8$

(b) $7/8 - 1/4 + 3/6 = 21/24 - 6/24 + 12/24 = 27/24 = 1\ 1/8$

(c) $2\ 5/12 + 4\ 5/8 - 2\ 1/2 = 2\ 10/24 + 4\ 15/24 - 2\ 12/24 = 4\ 13/24$

(d) $4\ 5/7 - 19/21 + 2\ 1/3 = 4\ 15/21 - 19/21 + 2\ 7/21 = 6\ 3/21 = 6\ 1/7$

3. Word problems:

(a) Sum of $3\ 4/10 + 3\ 1/5 = 3\ 4/10 + 3\ 2/10 = 6\ 6/10 = 6\ 3/5$;

$12 - 6\ 3/5 = 11\ 5/5 - 6\ 3/5 = 5\ 2/5$

(b) Diff of $7/12 - 5/24 = 14/24 - 5/24 = 9/24 = 3/8$;

$8\ 4/12 - 3/8 = 8\ 8/24 - 9/24 = 7\ 32/24 - 9/24 = 7\ 23/24$

Let's Do 7.5

1. Gopal read $3/7$ Saturday + $4/7$ Sunday = $7/7 = 1$ whole

Yes, he read the entire book.

2. Navya: 4 pizzas - $2\ 1/4 - 2/4 = 4 - 2\ 3/4 = 3\ 4/4 - 2\ 3/4$

$1\ 1/4$ pizzas left.

3. Sohni: $2\ 1/2 + 2\ 2/3 + 3\ 3/4 = 2\ 6/12 + 2\ 8/12 + 3\ 9/12 = 7\ 23/12 = 8$

$11/12$ kg of fruit in all.

4. Mrs. John $6\ 1/2$ l vs Mrs. Khan $4\ 4/5$ l $\rightarrow 6\ 1/2 - 4\ 4/5 = 6\ 5/10 - 4\ 8/10$

Mrs. John bought more by $1\ 7/10$ l.

5. $100 - 73\ 4/5 = 99\ 5/5 - 73\ 4/5 = 26\ 1/5$ kg rice left.

6. Hardik spends: $1/5 + 1/3 + 1/4 = 12/60 + 20/60 + 15/60 = 47/60$. Saves:

$60/60 - 47/60 = 13/60$ of his salary.

Let's Revise

1. Proper fraction

2. Improper fractions

3(a). $N > D \rightarrow$ improper

3(b). $D > N \rightarrow$ proper

4. Mixed number

5. As mixed fractions:

(a) $18/7 = 2\ 4/7$

(b) $25/12 = 2\ 1/12$

(c) $97/13 = 7\ 6/13$

6. As improper fractions:

(a) $3 \frac{1}{2} = \frac{7}{2}$

(b) $6 \frac{1}{2} = \frac{13}{2}$

(c) $7 \frac{1}{8} = \frac{57}{8}$

7. One equivalent fraction each:

(a) $\frac{2}{5} = \frac{4}{10}$

(b) $\frac{7}{12} = \frac{14}{24}$

(c) $\frac{9}{13} = \frac{18}{26}$

8. Simplest form:

(a) $\frac{24}{12} = 2$

(b) $\frac{8}{32} = \frac{1}{4}$

(c) $\frac{24}{96} = \frac{1}{4}$

9. Find the sum:

(a) $\frac{5}{11} + \frac{3}{11} = \frac{8}{11}$

(b) $3 \frac{4}{5} + 3 \frac{1}{10} = 3 \frac{8}{10} + 3 \frac{1}{10} = 6 \frac{9}{10}$

10. Find the difference:

(a) $2 \frac{1}{9} - 1 \frac{2}{9} = 1 \frac{10}{9} - 1 \frac{2}{9} = \frac{8}{9}$

(b) $3 \frac{4}{5} - 3 \frac{1}{10} = 3 \frac{8}{10} - 3 \frac{1}{10} = \frac{7}{10}$

11. Simplify:

(a) $3 \frac{1}{2} + 1 \frac{3}{7} - 1 \frac{1}{3} = 3 \frac{21}{42} + 1 \frac{18}{42} - 1 \frac{14}{42} = 3 \frac{25}{42}$

(b) $5 \frac{1}{2} + 3 \frac{2}{4} + 4 \frac{3}{8} = 5 \frac{4}{8} + 3 \frac{4}{8} + 4 \frac{3}{8} = 12 \frac{11}{8} = 13 \frac{3}{8}$

MCQ

1. (b) 5 2. (a) $\frac{14}{17}$ 3. (b) the 3×3 grid with 4 coloured



DECIMALS

Task-1

1. Shaded portions as fractions and decimal fractions:

(a) 10 out of 100 shaded $\rightarrow \frac{10}{100} = 0.10$

(b) 50 out of 100 shaded $\rightarrow \frac{50}{100} = 0.50$

(c) 125 out of 1000 shaded $\rightarrow \frac{125}{1000} = 0.125$

2. Complete the table:

	Decimal	Fraction
(a)	2.2	$\frac{22}{10}$ (given)
(b)	3.4	$3 \frac{4}{10}$
(c)	3.6 (given)	$\frac{6}{10}$
(d)	4.1	$4 \frac{1}{10}$

3. (a) 0.32 / Thirty two hundredths (given)

(b) 0.45 / Forty five hundredths

(c) 0.55 / Fifty five hundredths

Let's Do 8.1

1. Place Value Chart:

	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
(a) 4.830	—	—	4	.	8	3	0
(b) 0.015	—	—	0	.	0	1	5
(c) 215.152	2	1	5	.	1	5	2
(d) 505.162	5	0	5	.	1	6	2

2. Three ways:

(a) Standard Form: 32.38

Word Form: Thirty two and thirty eight hundredths

Expanded Form: $30 + 2 + 3/10 + 8/100$

(b) Standard Form: 203.356

Word Form: Two hundred three and three hundred fifty six thousandths

Expanded Form: $200 + 3 + 3/10 + 5/100 + 6/1000$

(c) Standard Form: 45.27

Word Form: Forty five and twenty seven hundredths

Expanded Form: $40 + 5 + 2/10 + 7/100$

3. Write as decimals:

(a) $3/100 = 0.03$

(b) $261/10 = 26.1$

(c) $807/1000 = 0.807$

(d) $3 \frac{2}{100} = 3.02$

(e) $105 \frac{105}{1000} = 105.105$

4. Write as fractions:

(a) $0.80 = 80/100 = 4/5$

(b) $13.1 = 131/10$

(c) $0.082 = 82/1000 = 41/500$

(d) $4.05 = 405/100 = 81/20$

(e) $3.245 = 3245/1000 = 649/200$

Task-2

1. True or False:

(a) $0.45 = 0.0045 \rightarrow$ False

(b) $0.52 = 0.520 \rightarrow$ True

(c) $5.54 = 5.503 \rightarrow$ False

(d) $0.30 = 0.03 \rightarrow$ False

(e) $4.56 = 4.560 \rightarrow$ True

(f) $0.37 = 0.37000 \rightarrow$ True

2. Fill in $>$, $<$ or $=$:

(a) $0.13 < 0.134$

(b) $0.526 > 0.265$

(c) $0.352 < 0.362$

(d) $1.36 > 1.26$

(e) $2.165 < 2.166$

(f) $23.05 < 23.5$

3. Ascending Order:

(a) 0.451, 0.54, 0.546, 0.645

(b) 1.105, 1.501, 1.505, 5051.34

(c) 0.305, 0.317, 3.05, 5.031

4. Descending Order:

(a) 0.533, 0.532, 0.32, 0.31, 0.23

(b) 0.651, 0.65, 0.435, 0.178, 0.139

(c) 2.506, 1.76, 1.532, 1.35, 0.35

Task-3

1. Add:

(a) $3.2 + 0.5 = 3.7$

(b) $0.9 + 0.3 = 1.2$

(c) $0.4 + 0.9 = 1.3$

(d) $2.3 + 2.7 = 5.0$

(e) $0.32 + 0.27 = 0.59$

(f) $0.55 + 0.67 = 1.22$

(g) $2.32 + 3.76 = 6.08$

(h) $12.36 + 11.05 = 23.41$

2. Find the sum:

(a) $403.78 + 45.66 + 12.10 = 461.54$

(b) $20.75 + 342.1 + 13.744 = 376.594$

(c) $4.124 + 0.31 + 0.37 = 4.804$

(d) $412.3 + 36.164 + 15.4 = 463.864$

(e) $0.5 + 5.55 + 55.555 = 61.605$

(f) $204.600 + 110.13 + 323.244 = 637.974$

3. Simplify:

(a) $421.34 + 2635.214 + 15.32 = 3071.874$

(b) $143.21 + 0.403 + 42.34 = 185.953$

(c) $42.1 + 4.305 + 203.4 = 249.805$

(d) $42.43 + 1.8383 + 217.35 + 32.53 = 294.1483$

Task-4

1. Subtract:

(a) $0.6 - 0.4 = 0.2$

(b) $0.85 - 0.26 = 0.59$

(c) $4.73 - 0.62 = 4.11$

(d) $5.31 - 4.67 = 0.64$

(e) $63.36 - 14.94 = 48.42$

(f) $6.486 - 1.004 = 5.482$

(g) $9.7097 - 4.8573 = 4.8524$

(h) $6.46 - 2.793 = 3.667$

(i) $55.330 - 12.78 = 442.546$

2. Simplify:

(a) $64.7 - 18.84 = 45.86$

(b) $708.396 - 503.202 = 205.194$

(c) $8325 - 4682.502 = 3642.498$

Let's Do 8.2

1. True or False:

(a) $4.140 \text{ kg} = 4.14 \text{ kg} \rightarrow \text{True}$

(b) $\text{₹}15.400 = \text{₹}15.004 \rightarrow \text{False}$

(c) $2 \text{ kg } 500 \text{ g} = 2.5 \text{ kg} \rightarrow \text{True}$

(d) $42 \text{ m} = 0.42 \text{ cm} \rightarrow \text{False}$

2. Decimal form:

(a) $42 \text{ ℓ } 402 \text{ ml} = 42.402 \text{ ℓ}$

(b) $38 \text{ rupees } 6 \text{ paise} = \text{₹}38.06$

(c) $13 \text{ m } 7 \text{ cm} = 13.07 \text{ m}$

(d) $50 \text{ km } 8 \text{ m} = 50.008 \text{ km}$

(e) $46 \text{ kg } 360 \text{ g} = 46.360 \text{ kg}$

(f) $418 \text{ cm} = 4.18 \text{ m}$

Let's Revise

Decimal of the Day: 25.36

1. Word form: Twenty five and thirty six hundredths
2. Fraction form: $25\frac{36}{100} = \frac{2536}{100}$
3. Expanded form: $20 + 5 + \frac{3}{10} + \frac{6}{100}$
4. Add 6.54: $25.36 + 6.54 = 31.90$
5. Subtract 23.26: $25.36 - 23.26 = 2.10$
6. 2 decimals greater: e.g., 25.37, 26.00
7. 2 decimals lesser: e.g., 25.35, 25.00

MCQ

1. (a) 0.00018 2. (c) 0.80, 0.85 3. (b) 0.65



MEASUREMENT

Let's Do 10.11.

1. Answer the following:

- (a) Smallest unit of weight = milligram (mg); Largest unit = kilogram (kg)
- (b) Basic unit of capacity = Litre (l)
- (c) 1000 times greater than 1 metre = Kilometre (km)
- (d) 100 times lesser than 1 metre = Centimetre (cm)

2. Fill in the blanks:

- | | | |
|---------------------|---------------------|---------------------|
| (a) 1 km = 1000 m | (b) 100 cm = 1 m | (c) 100 m = 1 hm |
| (d) 10 mm = 1 cm | (e) 1 ml = 1/10 cl | (f) 1 l = 1/1000 kl |
| (g) 1 cm = 1/1000 m | (h) 1 mg = 1/1000 g | (i) 1 g = 1/1000 kg |

Task-1

1. Convert cm ↔ m:

- | | | |
|------------------|------------------|-----------------------|
| (a) 40 m 4000 cm | (b) 15 m 1500 cm | (c) 16 m 5 cm 1605 cm |
|------------------|------------------|-----------------------|

2. Convert m ↔ km:

- | | | |
|-----------------|-----------------------|-------------------------|
| (a) 3 km 3000 m | (b) 6 km 500 m 6500 m | (c) 15 km 300 m 15300 m |
|-----------------|-----------------------|-------------------------|

3. Convert g ↔ kg:

- | | | |
|--------------------|-----------------------|-----------------------|
| (a) 75 kg 75,000 g | (b) 2 kg 500 g 2500 g | (c) 3 kg 200 g 3200 g |
|--------------------|-----------------------|-----------------------|

4. Convert l ↔ ml:

- | | | |
|-----------------|------------------------|--------------------|
| (a) 5 l 5000 ml | (b) 2 l 500 ml 2500 ml | (c) 24 l 24,000 ml |
|-----------------|------------------------|--------------------|

Task-2

1. Add:

- (a) 50 cm 03 mm + 21 cm 05 mm = 71 cm 08 mm

- (b) $42\text{ kg } 129\text{ g} + 20\text{ kg } 705\text{ g} = 62\text{ kg } 834\text{ g}$
 (c) $3\text{ l } 859\text{ ml} + 4\text{ l } 520\text{ ml} = 8\text{ l } 379\text{ ml}$
 (d) $7\text{ km } 500\text{ m} + 3\text{ km } 200\text{ m} = 10\text{ km } 700\text{ m}$
 (e) $16\text{ m } 53\text{ cm} + 7\text{ m } 52\text{ cm} = 23\text{ m } 105\text{ cm} = 24\text{ m } 05\text{ cm}$
 (f) $14\text{ km } 300\text{ m } 32\text{ cm} + 25\text{ km } 200\text{ m } 80\text{ cm} = 39\text{ km } 501\text{ m } 12\text{ cm}$

2. Add:

- (a) $45\text{ kg } 250\text{ g} + 16\text{ kg } 400\text{ g} + 7\text{ kg } 815\text{ g}$:
 $\text{g: } 250+400+815 = 1465\text{ g} = 1\text{ kg } 465\text{ g}$ $\text{kg: } 45+16+7+1 = 69\text{ kg } 465\text{ g}$
 (b) $43\text{ l } 360\text{ ml} + 21\text{ l } 800\text{ ml} + 15\text{ l } 50\text{ ml}$:
 $\text{ml: } 360+800+50 = 1210\text{ ml} = 1\text{ l } 210\text{ ml}$ $\text{l: } 43+21+15+1 = 80\text{ l } 210\text{ ml}$

Task-3

1. Subtract:

- (a) $5\text{ km } 830\text{ m} - 2\text{ km } 400\text{ m} = 3\text{ km } 430\text{ m}$
 (b) $36\text{ kg } 600\text{ g} - 21\text{ kg } 600\text{ g} = 15\text{ kg } 000\text{ g} = 15\text{ kg}$
 (c) $15\text{ cm } 4\text{ mm} - 4\text{ cm } 8\text{ mm} = 10\text{ cm } 6\text{ mm}$
 (d) $36\text{ l } 300\text{ ml} - 6\text{ l } 500\text{ ml} = 29\text{ l } 800\text{ ml}$
 (e) $79\text{ m } 70\text{ cm} - 14\text{ m } 90\text{ cm} = 64\text{ m } 80\text{ cm}$
 (f) $21\text{ km } 300\text{ m } 65\text{ cm} - 5\text{ km } 175\text{ m } 30\text{ cm} = 16\text{ km } 125\text{ m } 35\text{ cm}$

2. Subtract:

- (a) $192\text{ km } 260\text{ m} - 35\text{ km } 243\text{ m} = 157\text{ km } 017\text{ m}$
 (b) $53\text{ kg } 750\text{ g} - 46\text{ kg } 500\text{ g} = 7\text{ kg } 250\text{ g}$
 (c) $16\text{ km } 000\text{ m} - 3\text{ km } 215\text{ m} = 12\text{ km } 785\text{ m}$
 (d) $36\text{ l } 483\text{ ml} - 15\text{ l } 320\text{ ml} = 21\text{ l } 163\text{ ml}$

Task-4

1. Multiply:

- (a) $12\text{ km } 825\text{ m} \times 5$: $825 \times 5 = 4125\text{ m} = 4\text{ km } 125\text{ m}$; $12 \times 5 + 4 = 64\text{ km } 125\text{ m}$
 (b) $36\text{ kg } 652\text{ g} \times 7$: $652 \times 7 = 4564\text{ g} = 4\text{ kg } 564\text{ g}$; $36 \times 7 + 4 = 256\text{ kg } 564\text{ g}$
 (c) $57\text{ m } 75\text{ cm} \times 11$: $75 \times 11 = 825\text{ cm} = 8\text{ m } 25\text{ cm}$; $57 \times 11 + 8 = 635\text{ m } 25\text{ cm}$
 (d) $20\text{ l } 825\text{ ml} \times 15$: $825 \times 15 = 12375\text{ ml} = 12\text{ l } 375\text{ ml}$; $20 \times 15 + 12 = 312\text{ l } 375\text{ ml}$

2. Divide:

- (a) $3982\text{ kg } 624\text{ g} \div 32$: $3982\text{ kg } 624\text{ g} = 3,982,624\text{ g} \div 32 = 124\text{ kg } 457\text{ g}$
 (b) $853\text{ m } 22\text{ cm} \div 37$: $85322\text{ cm} \div 37 = 23\text{ m } 06\text{ cm}$
 (c) $235\text{ kg } 306\text{ g} \div 29$: $235,306\text{ g} \div 29 = 8\text{ kg } 114\text{ g}$
 (d) $12\text{ l } 150\text{ ml} \div 6$: $12150\text{ ml} \div 6 = 2\text{ l } 025\text{ ml}$

3. Solve:

- (a) $16\text{ l } 50\text{ ml} - 4\text{ l } 250\text{ ml} = 11\text{ l } 800\text{ ml}$ of oil left
 (b) $52\text{ km } 600\text{ m} + 1600\text{ km } 50\text{ m} = 1652\text{ km } 650\text{ m}$ total distance

- (c) $6\text{ kg } 775\text{ g} - 3\text{ kg } 370\text{ g} = 3\text{ kg } 405\text{ g}$ of cake left
 (d) $2\text{ kg} = 2000\text{ g} \div 50\text{ g} = 40$ chocolates
 (e) $4\text{ km } 560\text{ m} = 4560\text{ m} \div 20\text{ m} = 228$ rose plants
 (f) $26\text{ l} = 26,000\text{ ml} \div 500\text{ ml} = 52$ bottles
 (g) $3\text{ m } 20\text{ cm} \times 22 = 320\text{ cm} \times 22 = 7040\text{ cm} = 70\text{ m } 40\text{ cm}$

Let's Revise

1. Solve:

- (a) $7\text{ kg} = 7 \times 1000 = 7000\text{ g}$ (b) $15\text{ km} = 15 \times 1000 = 15,000\text{ m}$

2. Change:

- (a) $8504\text{ g} = 8\text{ kg } 504\text{ g}$ (b) $9630\text{ m} = 9\text{ km } 630\text{ m}$

3. Find the sum:

- (a) $3\text{ kg } 710\text{ g} + 30\text{ kg } 410\text{ g} + 8\text{ kg } 150\text{ g}$:
 g: $710+410+150 = 1270\text{ g} = 1\text{ kg } 270\text{ g}$
 kg: $3+30+8+1 = 42\text{ kg } 270\text{ g}$
 (b) $14\text{ l } 320\text{ ml} + 5\text{ l } 200\text{ ml} + 263\text{ l}$:
 ml: $320+200+0 = 520\text{ ml}$
 l: $14+5+263 = 282\text{ l } 520\text{ ml}$

4. $5\text{ m } 30\text{ cm} \times 4 = 530\text{ cm} \times 4 = 2120\text{ cm} = 21\text{ m } 20\text{ cm}$

MCQ

1. (c) 93g 2. (d) 13 3. (c) 5060cm



GEOMETRY

Task-1

1. Name the 3D shape for each net

1. Cube 2. Cuboid (Rectangular Prism)
 3. Cone 4. Cylinder

Task-2

1. How many line segments in each figure?

- (a) 6 line segments (hexagon ABCDEF) (b) 10 line segments
 (c) 5 line segments (d) 10 line segments

4. Write the correct word:

- (a) Line segment (has two endpoints)
 (b) Ray (one endpoint, one arrow)
 (c) Line (arrows on both sides)

Let's Do 12.1

1. Name each angle in two ways:

- (a) PQR or RQP (b) ABC or CB (c) LMN or NML

2. Name vertex and arms:

- (a) Vertex: B; Arms: BA, BC (b) Vertex: E; Arms: ED, EF
(c) Vertex: M; Arms: ML, MN (d) Vertex: Y; Arms: YX, YZ
(e) Vertex: X; Arms: XY, XZ (f) Vertex: M; Arms: ML, MN

3. How many angles formed?

- (a) Figure with W, X, Y, Z: 3 angles — XWY, YWZ, XWZ
(b) Figure with A, B, C, D: 3 angles — ABD, DBC, ABC

Task-3

1. Write the type of angle:

- (a) Three angles labeled 1, 2, 3: Acute Acute Acute
(b) Two angles: Right angle Acute
(c) Two angles: Acute Obtuse
(d) Four angles (at intersection): Acute Obtuse Acute Obtuse

2. Acute, obtuse, right or straight:

- (a) $50^\circ \rightarrow$ Acute (b) $90^\circ \rightarrow$ Right (c) $10^\circ \rightarrow$ Acute
(d) $131^\circ \rightarrow$ Obtuse (e) $180^\circ \rightarrow$ Straight (f) $100^\circ \rightarrow$ Obtuse

Let's Do 12.2

2. Name each angle:

- (a) Obtuse (b) Acute (c) Obtuse (d) Right
(e) Straight (f) Right

Task-4

1. Fill in the blanks:

- (a) Diameter (b) Centre (c) Twice (d) Circumference
(e) Semicircles

2. Complete the table (from the circle diagram):

- (a) Radius = OA (or OX, OQ, OP, OY) (b) Diameter = XA (or YP)
(c) Chord = XY (or any chord shown) (d) Centre = O

4. Complete the Radius/Diameter table:

- (a) Radius = 10 cm (Diameter = 20 cm)
(b) Diameter = 12 cm (Radius = 6 cm)
(c) Radius = 7 cm (Diameter = 14 cm)
(d) Diameter = 16 cm (Radius = 8 cm)

Task-5

1. Name figures and symmetry about dotted line:

- (a) Rectangle — dotted line is vertical Symmetric
- (b) Kite — vertical dotted line → Symmetric
- (c) Rhombus — horizontal dotted line → Symmetric

2. Is the figure symmetrical?

- (a) Square → Yes
- (b) Parallelogram → No
- (c) L-shape → No
- (d) Tree/irregular shape → No
- (e) Cross (+) → Yes
- (f) Circles pattern → Yes

3. Lines of symmetry for letters: A (vertical), B (horizontal), C (horizontal), D (horizontal), E (horizontal), Y (vertical), V (vertical)

Let's Revise

1. Fill in the blanks:

- (a) Vertex (Corner)
- (b) Triangle
- (c) Cube
- (d) Opposite
- (e) One
- (f) Line segment
- (g) Line
- (h) Line segment

2. True or False:

- (a) T
- (b) T
- (c) T
- (d) T
- (e) F

3. Count line segments:

- (a) Octagon (ABCDEFGH) → 8
- (b) Rectangle with diagonals → 6
- (c) Kite with diagonals → 6

MCQ

- 1. (c) 12 triangles
- 2. (c) 5 squares
- 3. (e) All of these



PERIMETER AND AREA

Task 1:

1. Find the Perimeter

- (a) Perimeter = $8 + 3 + 2 + 7 + 6 + 10 = 36$ cm
- (b) Perimeter = $12 + 7 + 4 + 2 + 8 + 9 + 4 + 3 = 49$ cm
- (c) Perimeter = $7 + 2 + 3 + 2 + 2 + 1 + 6 + 5 = 28$ cm
- (d) Perimeter = $2.5 + 1.5 + 1 + 1.5 + 5 + 4 + 3 + 1 + 2.5 = 22$ cm

2. Perimeter of Square ($P = 4 \times \text{side}$)

- (a) $4 \times 4 = 16$ cm
- (b) $4 \times 6 = 24$ cm
- (c) $4 \times 3.5 = 14$ cm

3. Perimeter of Rectangle ($P = 2 \times (L+B)$)

- (a) $2 \times (4+3) = 14$ cm (b) $2 \times (6+2) = 16$ cm (c) $2 \times (3.5+2.5) = 12$ cm

4. Find Side of Square ($\text{Side} = P \div 4$)

- (a) $64 \div 4 = 16$ cm (b) $48 \div 4 = 12$ cm (c) $144 \div 4 = 36$ cm

Let's Do 13.1

- Perimeter of ground = $2 \times (15+10) = 50$ m of wire needed
- The park has 4 equal sides of 5 m (two triangles sharing middle, outer boundary = $3+5+3+3+5+3 = 22$ m...
outer 6 sides: 3,5,3,3,5,3 $\rightarrow$ Perimeter = 22 m)
- Equilateral triangle side = 25 m, Perimeter = 75 m; Cost = $75 \times ₹60 = ₹4,500$

Task 2:

1. Area by Counting Squares Counting enclosed squares in each figure:

- (a) ≈ 14 sq. cm (b) ≈ 18 sq. cm (c) ≈ 20 sq. cm (d) ≈ 20 sq. cm

2. Area of Square ($A = \text{side}^2$)

- (a) $14^2 = 196$ sq. cm (b) $21^2 = 441$ sq. m (c) $18^2 = 324$ sq. km

3. Area of Rectangle ($A = L \times B$)

- (a) $12 \times 8 = 96$ sq. cm (b) $12.5 \times 16.6 = 207.5$ sq. cm
(c) $3.2 \times 12 = 38.4$ sq. m (d) $15 \times 5 = 75$ sq. m

4. Fill Missing Values

- (a) $5 \times 7 = 35$ sq. m (b) $9 \times 7 = 63$ sq. cm (c) $6 \times 6 = 36$ sq. cm
(d) $6 \times 3 = 18$ sq. m

5. Area of Composite Figures

- (a) 68 sq. cm (b) 17 sq. cm

Let's Revise

1. Fill in the Blanks

- (a) Area of a square = side $\times$ side
(b) Area of a rectangle = length $\times$ breadth
(c) Perimeter of a square = $4 \times$ side
(d) Perimeter of equilateral triangle = $3 \times$ side

2. Draw & Find Perimeter of Square

- (a) Side = 3 cm $\rightarrow$ Perimeter = 12 cm
(b) Side = 4 cm $\rightarrow$ Perimeter = 16 cm

3. Draw & Find Perimeter of Rectangle

- (a) $L=5, B=2 \rightarrow$ Perimeter = 14 cm (b) $L=8, B=4 \rightarrow$ Perimeter = 24 cm

MCQ

1. (b) 22m 2. (c) 18 3. (b)

Let's Do 14.1**2. Favourite Subjects Bar Graph**

- (a) Which subject do children like the most? → Maths (9 children)
- (b) How many children like English? → 4 children
- (c) Which subject do children like the least? → English (4 children)

3. Raj's Cricket Practice (Horizontal Bar Graph)

Reading the bars: Monday $\approx$ 2 hrs, Tuesday $\approx$ 4 hrs, Wednesday $\approx$ 1.5 hrs, Thursday $\approx$ 3 hrs

- (a) On which day did Raj spend the maximum time? → Tuesday
- (b) How many hours did Raj practice on Wednesday? → 1.5 hours
- (c) Total hours over all 4 days → $2 + 4 + 1.5 + 3 = 10.5$ hours

4. Sravya's Day (Pie Chart)

- (a) Where was Sravya for the fewest number of hours? → Playground
- (b) How many hours did Sravya sleep? → 9 hours
- (c) Time at home and playground together → $6 + 3 = 9$ hours

5. Tree Pictograph (1 symbol = 8 trees)

Counting symbols: Banyan = 6, Neem = 6, Mango = 4

- (a) How many mango trees? → $4 \times 8 = 32$ trees
- (b) How many banyan trees? → $6 \times 8 = 48$ trees
- (c) How many neem trees? → $6 \times 8 = 48$ trees
- (d) Total trees → $32 + 48 + 48 = 128$ trees

6. Families Bar Graph Reading the bars: 2 members = 10, 3 members = 10, 4 members = 25, 5 members = 15

- (a) What information does the bar graph give? → It shows the number of families with 2, 3, 4, and 5 members in a colony of 60 families.
- (b) How many families have 3 members? → 10 families
- (c) Which type of family is most common? → 4-member families (25 families)

**MODEL TEST PAPER - 1****1. Number names (Indian Place Value System):**

- (a) 78,56,521 = Seventy-eight lakh fifty-six thousand five hundred twenty-one
- (b) 99,90,090 = Ninety-nine lakh ninety thousand ninety

2. Addition:

(a) $10,10,91 + 44,21,05 + 20,69,47 = 75,01,43$

(b) $31,59,10 + 22,37,77 + 10,46,61 = 64,43,48$

(c) $44,82,27 + 17,02,14 + 12,00,11 = 73,84,52$

3. $\text{₹}2,84,500 + \text{₹}1,63,000 = \text{₹}4,47,500$

4. $8,85,765 - 2,458 = 8,83,307$ votes

5. Products:

(a) $613 \times 505 = 3,09,565$

(b) $8946 \times 130 = 11,62,980$

(c) $4823 \times 789 = 38,05,347$

6. $\text{₹}57,250 \div \text{₹}50 = 1,145$ notes

7. Fill in the blanks:

(a) $4300 \div 10 = 430$

(b) $460 \div 10 = 46$

(c) $3200 \div 100 = 32$

(d) $8000 \div 1000 = 8$

8. For 24 and 36: HCF = 12 LCM = 72

9. Sum of $3\frac{4}{10}$ and $3\frac{1}{5} = 3\frac{4}{10} + 3\frac{2}{10} = 6\frac{6}{10} = 6\frac{3}{5}$

Subtract from 12: $12 - 6\frac{3}{5} = 5\frac{2}{5}$

10. $2\frac{1}{2} + 2\frac{2}{3} + 3\frac{3}{4} = 30/12 + 32/12 + 45/12 = 107/12 = 8\frac{11}{12}$ kg



MODEL TEST PAPER - 2

1. Write as decimals:

(a) $3/100 = 0.03$

(b) $261/10 = 26.1$

(c) $807/1000 = 0.807$

(d) $3\frac{2}{100} = 3.02$

2. $\text{₹}200 - \text{₹}96 - \text{₹}57 = \text{₹}47$ left

3. Conversion table:

(a) 40 m = 4000 cm

(b) 1500 cm = 15 m

(c) 16 m 5 cm = 1605 cm

4. 3 m 20 cm = 320 cm; $320 \times 22 = 7040$ cm = 70 m 40 cm

5. Clock hands — draw as instructed:

(a) 5:25 — minute hand on 5, hour hand just past 5

(b) 3:35 — minute hand on 7, hour hand just past 3

(c) 8:35 — minute hand on 7, hour hand just past 8

(d) 1:10 — minute hand on 2, hour hand just past 1

7. Perimeter = $2 \times (\text{length} + \text{breadth}) = 2 \times (15 + 10) = 50$ m of wire

8. Pictograph/bar graph based on: Car=60,

Robot=45, Tonks=25, Aeroplane=65, Doll=30



LARGE NUMBERS

TASK-1

1. Fill in the blanks:

- (A) (i) 1 thousand = 10 hundreds
 (ii) 1 lakh = 100 thousands
 (B) Digits: 8, 4, 3, 2, 7, 0
 (C) Smallest possible number = 2,03,478 (0 cannot be leading digit)
 (D) Smallest whole number = 0 (whole numbers include 0)
 (E) Smallest natural number = 1 (F) Successor of 2,64,879 = 2,64,880
 (G) Predecessor of 5,00,000 = 4,99,999
 (H) Place value of 8 in 5,38,432 = 8,000 (thousands place)
 (I) Greatest 3-digit number = 999; Smallest 4-digit number = 1000
 Sum = $999 + 1000 = 1,999$

TASK-2

1. Write number names (Indian System):

- (a) 4,30,28,314 = Four crore thirty lakh twenty-eight thousand three hundred and fourteen
 (b) 70,00,20,305 = Seventy crore twenty thousand three hundred and five
 (c) 8,00,00,319 = Eight crore three hundred and nineteen

2. Write numerals (Indian System):

- (a) Thirty crore seventy-five lakh twenty thousand eight hundred and four
 = 30,75,20,804
 (b) Four crore fifteen lakh thirty-eight thousand and four = 4,15,38,004
 (c) Sixty crore thirty-four lakh fifty thousand three hundred = 60,34,50,300

3. Write numerals in words:

- (a) Smallest eight-digit number = 1,00,00,000 = One crore
 (b) Smallest nine-digit number = 10,00,00,000 = Ten crore
 (c) Greatest seven-digit number = 99,99,999
 = Ninety-nine lakh ninety-nine thousand nine hundred and ninety-nine

4. Write numerals in figures:

- (a) 10 lakh more than 48,32,118 = $48,32,118 + 10,00,000 = 58,32,118$
 (b) 1 lakh more than 6,43,438 = $6,43,438 + 1,00,000 = 7,43,438$
 (c) 1 crore less than 7,37,43,418 = $7,37,43,418 - 1,00,00,000 = 6,37,43,418$

TASK-3

1. Number names (International System):

- (a) 6,402,514 = Six million four hundred two thousand five hundred fourteen
- (b) 60,305,140 = Sixty million three hundred five thousand one hundred forty
- (c) 30,205,143 = Thirty million two hundred five thousand one hundred forty-three

2. Write numerals (International System):

- (a) Forty-five million = 45,000,000
- (b) Five hundred thirty million five hundred and nine = 530,000,509
- (c) Three hundred thirty million five thousand = 330,005,000

LET'S DO 1.1

1. Place value of digits 3 and 8:

- (a) 4,32,85,215 → 3 is in ten-lakhs place = 3,00,000; 8 is in ten-thousands place = 80,000
3: ten-lakh place = 30,00,000; 8: ten-thousand place = 80,000
- (b) 66,74,30,108 → 3 is in hundreds place = 300; 8 is in ones place = 8
- (c) 80,32,75,914 → 8 is in ten-crores place = 80,00,00,000; 3 is in ten-lakhs place = 30,00,000

2. Expanded form:

- (a) 43,14,20,813 = 40,00,00,000 + 3,00,00,000 + 10,00,000 + 4,00,000 + 20,000 + 800 + 10 + 3
- (b) 36,23,91,005 = 30,00,00,000 + 6,00,00,000 + 20,00,000 + 3,00,000 + 90,000 + 1,000 + 5
- (c) 8,32,75,914 = 8,00,00,000 + 30,00,000 + 2,00,000 + 70,000 + 5,000 + 900 + 10 + 4
- (d) 6,00,35,412 = 6,00,00,000 + 30,000 + 5,000 + 400 + 10 + 2

3. Short form:

- (a) 60,00,00,000 + 4,00,00,000 + 80,00,000 + 2,00,000 + 10,000 + 3,000 + 700 + 50 + 3 = 64,82,13,753
- (b) 8 ten crore + 3 crore + 4 ten lakh + 1 lakh + 6 ten thousand + 8 thousand + 4 hundred + 2 tens + 8 ones = 83,41,68,428
- (c) $9 \times 10,00,00,000 + 5 \times 10,00,000 + 4 \times 10,000 + 3 \times 1,000 + 2 \times 100 + 4 \times 10 + 7 \times 1$
= 90,50,43,247

4. Ascending order:

- (a) 60,41,36,832 < 63,24,48,005 < 63,24,82,108 < 66,14,00,342
- (b) 4,03,14,005 < 4,30,14,005 < 4,30,41,050 < 4,30,41,500
- (c) 6,00,00,006 < 6,00,60,000 < 6,00,60,666 < 6,66,06,600

5. Descending order:

- (a) 8,44,05,990 > 8,44,05,000 > 8,43,13,005 > 8,34,31,500
- (b) 66,43,30,009 > 66,32,43,814 > 65,33,44,265 > 65,30,40,532 > 65,23,44,265
- (c) 9,66,32,438 > 9,60,40,333 > 9,60,30,263 > 9,06,00,543 > 9,00,40,532

6. Period and place values of underlined digits:

- (a) 68,36,43,843 → 6: ten-crores period, value = 60,00,00,000;
8: ones period (hundreds), value = 800
(b) 41,32,68,903 → 4: crores period, value = 40,00,00,000;
6: thousands period, value = 60,000
(c) 13,45,06,793 → 4: ten-lakhs, value = 40,00,000; 7: hundreds, value = 700

LET'S DO 1.2

1. Greatest possible number (no repetition):

- (a) Digits 1,0,3,9,7,8,5,2 → 98,75,32,10
(b) Digits 6,0,4,9,7,5,3,1 → 97,65,43,10

2. Smallest possible number (no repetition):

- (a) Digits 9,4,8,1,3,2,5 → 12,34,589
(b) Digits 9,0,5,1,3,6,4 → 10,34,569

3. Fill the circles (centre: 52,58,125):

- | | |
|-------------------------|-------------------------|
| 10,000 Less = 52,48,125 | 1,000 Less = 52,57,125 |
| 100 Less = 52,58,025 | 10 More = 52,58,135 |
| 1,000 More = 52,59,125 | 10,000 More = 52,68,125 |

TASK-4

1. Round off to nearest 10:

- (a) 810 (b) 030 (c) 2420 (d) 268270 (e) 64326430
(f) 46,32,00546,32,010

Let's Do 1.3

1. Round to nearest 100, 1000, 10,000:

- (a) 49,24649,20049,00050,000
(b) 32,43,26832,43,30032,43,00032,40,000
(c) 64,94265,00065,00060,000
(d) 18,23,94318,23,90018,24,00018,20,000
(e) 64,24964,20064,00060,000
(f) 6,93,4856,93,5006,93,0006,90,000

2. Round to nearest lakh and ten lakh:

- (a) 63,36,43263,00,00060,00,000
(b) 64,36,63264,00,00060,00,000
(c) 4,36,41,2834,36,00,0004,40,00,000
(d) 9,05,3639,00,00010,00,000
(e) 48,93,21449,00,00050,00,000
(f) 24,32,54624,00,00020,00,000
(g) 1,35,8031,00,0000 (or 0)
(h) 65,43,90865,00,00060,00,000

Let's Revise

1. Fill in the blanks:

- (a) Predecessor of smallest 7-digit number (10,00,000) = 9,99,999
- (b) 1,000,000 is successor of 999,999
- (c) $3,65,23,943 + 1$ gives the successor of 3,65,23,943
- (d) Successor of ten million (10,000,000) = 10,000,001

2. Number names:

- (a) Indian: 43,24,05,382 = Forty-three crore twenty- four lakh five thousand three hundred and eighty-two
International: 432,405,382 = Four hundred thirty-two million four hundred five thousand three hundred eighty-two
- (b) Indian: 7,82,56,714 = Seven crore eighty-two lakh fifty-six thousand seven hundred and fourteen
International: 78,256,714 = Seventy-eight million two hundred fifty-six thousand seven hundred fourteen

3. Expanded form:

- (a) $34,28,63,148 = 30,00,00,000 + 4,00,00,000 + 20,00,000 + 8,00,000 + 60,000 + 3,000 + 100 + 40 + 8$
- (b) $19,28,85,393 = 10,00,00,000 + 9,00,00,000 + 20,00,000 + 8,00,000 + 80,000 + 5,000 + 300 + 90 + 3$

4. Signs:

- (a) $6,63,48,119 < 6,66,48,119$
- (b) $3,33,00,333 > 3,300,333$

MCQ:

- 1. (c) 90200020
- 2. (c) 300 million 30 thousand and 1



ROMAN NUMERALS

Task-2: Put $>$, $<$ or $=$

- 1. $IV < VI$
- 2. $CDV < D$
- 3. $CXC > XC$
- 4. $D > L$
- 5. $XCIX < CIX$
- 6. $CDII < CDX$

Task-3:

Match the number with Roman Numeral

Number	Roman Numeral
(a) 86	(iii) LXXXVI
(b) 6050	(vi) VIL (as per book)
(c) 11050	(ix) XML (as per book)
(d) 90	(i) XC
(e) 52	(viii) LII

- | | |
|----------|-------------|
| (f) 395 | (ii) CCCXCV |
| (g) 929 | (v) CMXXIX |
| (h) 751 | (iv) DCCLI |
| (i) 1130 | (x) MCXXX |
| (j) 1210 | (vii) MCCX |

Let's Do 2.1

1. Write Roman numerals:

- | | | |
|---------------------|------------------|--------------------|
| (a) 201 = CCXI | (b) 242 = CCXLII | (c) 513 = DXIII |
| (d) 114 = CXIV | (e) 601 = DCI | (f) 734 = DCCXXXIV |
| (g) 615 = DCXV | (h) 314 = CCCXIV | (i) 444 = CDXLIV |
| (j) 834 = DCCCXXXIV | | |

2. Write in Hindu-Arabic notation:

- | | | |
|----------------|-----------------|----------------|
| (a) XXIX = 29 | (b) XXXVII = 37 | (c) XCIX = 99 |
| (d) CXIV = 114 | (e) CDX = 410 | (f) DXLI = 541 |
| (g) CLXX = 170 | (h) LXV = 65 | |

Let's Revise

- | | |
|---|----------------------|
| 1. Roman numerals | 2. 7 symbols |
| 3. V, L and D are never subtracted | 4. V and X only once |
| 5. C can be subtracted from D and M | 6. LVII = 57 |
| 7. XXX = $3 \times X$ (or 3×10) | 8. (c) XL |
| 9. (c) L | |

10. Multiply and write in Roman numerals:

- | | |
|---|---|
| (a) $VI \times VII = 6 \times 7 = 42 = XLII$ | (b) $X \times XII = 10 \times 12 = 120 = CXX$ |
| (c) $L \times D = 50 \times 500 = 25000 = XXV$ (in thousands) | |
| (d) $C \times XV = 100 \times 15 = 1500 = MD$ | |
| (e) $XX \times VII = 20 \times 7 = 140 = CXL$ | |
| (f) $L \times VIII = 50 \times 8 = 400 = CD$ | |

MCQ

- | | | |
|-------------|--------------|----------|
| 1. (a) XXIX | 2. (c) XVIII | 3. (b) V |
| 4. (c) IX | 5. (c) II | |

Task-1 — Addition

1. Add the following

- (b) $431,468,352 + 540,256,093 + 043,735,1 = 97,21,161,796$
 (c) $54,113,260 + 83,253,534 + 56,743,504 + 3,204,521 = 1,45,72,84,819$
 (d) $34,681,436 + 53,804,543 + 4,346,532 + 42,053,460 = 97,03,76,563$

Let's Do 3.1

1. Arrange & Add

- (a) $5,43,261 + 16,83,215 + 3,42,63,578 + 43,24,83,119 = 46,90,73,173$
 (b) $23,51,006 + 38,14,268 + 4,90,36,289 + 3,63,15,281 = 9,15,16,844$
 (c) $2,43,252 + 6,83,00,115 + 43,26,11,994 = 50,06,55,361$

Let's Do 3.2

1. Find the difference

- (a) $7,54,32,169 - 2,28,13,084 = 5,26,19,085$
 (b) $4,05,28,199 - 2,14,33,534 = 1,90,94,665$
 (c) $4,34,26,052 - 43,21,621 = 3,91,04,431$
 (d) $6,32,54,203 - 43,21,43 = 6,28,93,060 (= 6,32,54,203 - 4,32,143)$

2. Arrange & Subtract

- (a) $8,32,53,114 - 3,65,09,215 = 4,67,43,899$
 (b) $6,32,45,568 - 4,36,34,683 = 1,96,10,885$
 (c) $83,09,65,264 - 50,63,14,832 = 32,46,50,432$
 (d) $8,44,68,001 - 4,74,35,442 = 3,70,32,559$

3. Simplify

- (a) $5,34,682 + 4,436 - 8,426 = 5,39,118 - 8,426 = 5,30,692$
 (b) $1,04,426 - 33,142 - 6,482 = 71,284 - 6,482 = 64,802$
 (c) $4,32,05,614 + 3,25,432 - 5,41,832 = 4,35,31,046 - 5,41,832 = 4,29,89,214$

Let's Do 3.3 — Word Problems

- Cloth produced last year: 1,24,26,725 m; this year: 1,42,05,980 m
 Total = $1,24,26,725 + 1,42,05,980 = 2,66,32,705$ metres
 More this year = $1,42,05,980 - 1,24,26,725 = 17,79,255$ metres more
- How much more is 80,00,000 than 5,45,660?
 $= 80,00,000 - 5,45,660 = 74,54,340$
- To make 9 crores, what number added to 65,16,532 + 6,96,85,082?
 Sum = $65,16,532 + 6,96,85,082 = 7,62,01,614$
 Required = $9,00,00,000 - 7,62,01,614 = 1,37,98,386$
- Subtract sum of 8,14,384; 6,23,143; 30,05,168 from 65,00,000
 Sum = $8,14,384 + 6,23,143 + 30,05,168 = 44,42,695 = 65,00,000 - 44,42,695$
 $= 20,57,305$

5. Income ₹60,500; rent ₹9,500; education ₹2,560; provisions ₹4,832
 Total spent = $9,500 + 2,560 + 4,832 = 16,892$
 Remaining = $60,500 - 16,892 = ₹43,608$
6. Toys: $8,365 + 11,403 + 15,403 = 35,171$ toys
7. Males: 38,20,42,653 + Females: 36,15,60,255 + Children: 1,00,36,218
 = 75,36,39,126 (total population in 1985)
8. Total books: 6,42,340; Library 1: 2,10,970; Library 2: 1,54,730
 Library 3 = $6,42,340 - (2,10,970 + 1,54,730) = 6,42,340 - 3,65,700 = 2,76,640$ books

Task-3

1. Multiplication

- (a) $2043 \times 343 = 7,00,74$ (b) $1408 \times 642 = 9,03,936$
 (c) $4682 \times 569 = 26,64,65$ (d) $10,406 \times 600 = 62,43,600$
 (e) $5431 \times 2015 = 1,09,43,465$ (f) $3148 \times 2000 = 62,96,000$
 (g) $63,265 \times 5400 = 34,16,31,000$ (h) $7348 \times 9000 = 6,61,32,000$

Task-4 — Division

- (a) $48,265 \div 35$ Quotient = 1379, Remainder = 0
 (b) $35,432 \div 36$ Quotient = 984, Remainder = 8
 (c) $32,652 \div 64$ Quotient = 510, Remainder = 12
 (d) $2,18,294 \div 603$ Quotient = 361, Remainder = 671
 (e) $1,67,564 \div 2618$ Quotient = 64, Remainder = 12
 (f) $55,55,555 \div 1115$ Quotient = 4982, Remainder = 645

Let's Do 3.4

Word Problems (Multiplication & Division)

1. $900 \text{ chairs} \times ₹6,540 \text{ each} = ₹58,86,000$
 2. $14,340 \text{ quintals} \times ₹625 \text{ per quintal} = ₹89,62,500$
 3. $12,350 \text{ pens/day} \times (365-45) = 12,350 \times 320 \text{ days} = 39,52,000 \text{ pens}$
 4. Greatest 6-digit: 9,99,999 $\times$ Smallest 3-digit: 100 = 99,99,99,00 $\rightarrow$ 99,99,900
 5. Product = 85,188; one number = 458; other = ? Other = $85,188 \div 458 = 186$
 6. Divisor=452, Quotient=256, Remainder=45; find the number
 Number = $452 \times 256 + 45 = 1,15,712 + 45 = 1,15,757$

Task-6

1. Simplify (BODMAS)

- (a) $30 \div 6 + 4 = 5 + 4 = 9$
 (b) $32 - 25 \div 5 = 32 - 5 = 27$
 (c) $42 - 21 \div 7 \times 2 = 42 - 3 \times 2 = 42 - 6 = 36$
 (d) $14 + 8 \div 2 - 3 \times 3 = 14 + 4 - 9 = 9$
 (e) $12 - 3 \times 4 + 9 = 12 - 12 + 9 = 9$
 (f) $36 \div 6 + 4 \times 3 - 10 = 6 + 12 - 10 = 8$
 (g) $6 \times 20 + 18 \div 9 - 90 = 120 + 2 - 90 = 32$

$$(h) 5 \times 20 \div 5 + 20 - 20 = 100 \div 5 + 0 = 20 = 20$$

$$(i) 98 - 83 + 6 \div 3 \times 2 = 98 - 83 + 4 = 19$$

$$(j) 32 \div 8 + 15 - 5 \times 3 = 4 + 15 - 15 = 4$$

Let's Do 3.5

1. BODMAS with Brackets

$$(a) (999 \div 333) \times (3 \times 13) = 3 \times 39 = 117$$

$$(b) [200 + \{40 - (6 \times 2)\}] \times 10 = [200 + \{40 - 12\}] \times 10 = [200 + 28] \times 10 = 228 \times 10 = 2280$$

$$(c) 60 + [30 + \{12 - (6 \div 3)\}] = 60 + [30 + \{12 - 2\}] = 60 + [30 + 10] = 60 + 40 = 100$$

$$(d) 2645 \times [\{35 - (105 \div 3)\}] = 2645 \times [35 - 35] = 2645 \times 0 = 0$$

$$(e) [65 \times \{15 + (2 \times 10)\}] \div 5 = [65 \times \{15 + 20\}] \div 5 = [65 \times 35] \div 5 = 2275 \div 5 = 455$$

$$(f) 60 + [10 \times \{30 - (20 \div 5)\}] = 60 + [10 \times \{30 - 4\}] = 60 + [10 \times 26] = 60 + 260 = 320$$

$$(g) 14 \times [63 + \{20 - (10 \div 3)\}] = 14 \times [63 + \{20 - 13\}] = 14 \times [63 + 7] = 14 \times 70 = 980$$

2. Word-to-Expression

$$(a) \text{Sum of 20 and difference of 12 and 6} = 20 + (12 - 6) = 20 + 6 = 26$$

$$(b) \text{Difference between 32 and sum of 8 and 6} = 32 - (8 + 6) = 32 - 14 = 18$$

$$(c) \text{Product of 8 and 6} \div \text{difference of 18 and 10} = (8 \times 6) \div (18 - 10) = 48 \div 8 = 6$$

3. Write word statements for numerical expressions:

$$(a) 30 + (8 - 5) \quad \text{Add 30 to the difference of 8 and 5.}$$

$$(b) (32 - 12) \times (16 + 4) \quad \text{Multiply the difference of 32 and 12 by the sum of 16 and 4.}$$

$$(c) 35 \div (5 \times 7) \quad \text{Divide 35 by the product of 5 and 7.}$$

$$(d) (24 \div 8) + 10 \quad \text{Add the quotient of 24 divided by 8 to 10.}$$

$$(e) (18 - 9) \div (5 \times 4) \quad \text{Divide the difference of 18 and 9 by the product of 5 and 4.}$$

Let's Revise

1. Sum

2. Addends

3. Subtrahend

4. Minuend

5. Difference

6. Subtrahend

7. Minuend

8. Number itself

9. Predecessor

10. Successor

11. Number itself

MCQ

1. (c) 108 (b) 36

2. (c) 16611

3. (b) 99



MULTIPLES AND FACTORS

TASK-1

1. Factors of the following numbers:

- (a) $36 \rightarrow 1, 2, 3, 4, 6, 9, 12, 18, 36$ (b) $45 \rightarrow 1, 3, 5, 9, 15, 45$
(c) $116 \rightarrow 1, 2, 4, 29, 58, 116$ (d) $284 \rightarrow 1, 2, 4, 71, 142, 284$
(e) $628 \rightarrow 1, 2, 4, 157, 314, 628$
(f) $96 \rightarrow 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 96$
(g) $365 \rightarrow 1, 5, 73, 365$
(h) $400 \rightarrow 1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 200, 400$

2. Express as product of three factors:

- (a) $90 = 5 \times 3 \times 6$ (b) $224 = 4 \times 7 \times 8$ (c) $60 = 2 \times 5 \times 6$
(d) $105 = 3 \times 5 \times 7$ (e) $140 = 4 \times 5 \times 7$

3. (a) Consecutive even numbers between 51 and 71: 52, 54, 56, 58, 60, 62, 64, 66, 68, 70

(b) First 7 multiples of 13: 13, 26, 39, 52, 65, 78, 91

(c) Multiples of 12 between 50 and 100: 60, 72, 84, 96

(d) Odd numbers between 40 and 60: 41, 43, 45, 47, 49, 51, 53, 55, 57, 59

(e) Prime numbers between 50 and 90: 53, 59, 61, 67, 71, 73, 79, 83, 89

Task-2

1. Prime (P) or Composite (C) Number Answer

- (a) 15 - C (b) 17 - P (c) 26 - C (d) 84 - C
(e) 73 - P (f) 18 - C (g) 44 - C (h) 2 - P
(i) 79 - P (j) 115 - C (k) 113 - P (l) 63 - C

2. Factor Tree Puzzles

Tree 1: 30 $30 = 10 \times 3$ $10 = 2 \times 5$ Bottom row: $2 \times 5 \times 3$

Tree 2: 63 $63 = 9 \times 7$ $9 = 3 \times 3$ Bottom row: $3 \times 3 \times 7$

Tree 3: 72 $72 = 8 \times 9$ $8 = 2 \times 4$ $4 = 2 \times 2$

Bottom row: $2 \times 4 \times 9$, and $4 = 2 \times 2$

Task-3

1. Divisibility by 2, 5, 10

Number	$\div 2$	$\div 5$	$\div 10$
(a) 4326	✓	✗	✓
(b) 1625	✗	✓	✗
(c) 2540	✓	✓	✓
(d) 2512	✓	✗	✗
(e) 4327	✗	✗	✗
(f) 5425	✗	✓	✗
(g) 90,000	✓	✓	✓

(h) 4,210	✓	✓	✓
(i) 75,555	✗	✓	✗
(j) 2160	✓	✓	✓

2. Divisibility by 3, 6, 9

Number	Sum of digits	Div by 3?	Div by 2?	Div by 6?	Div by 9
21	3	Yes	No	No	No
42	6	Yes	Yes	Yes	No
38	11	No	Yes	No	No
45	9	Yes	No	No	Yes
62	8	No	Yes	No	No
105	6	Yes	No	No	No
93	12	Yes	No	No	No
26	8	No	Yes	No	No
48	12	Yes	Yes	Yes	No
64	10	No	Yes	No	No
96	15	Yes	Yes	Yes	No
144	9	Yes	Yes	Yes	Yes
204	6	Yes	Yes	Yes	No

Let's Do 4.1

1. Divisibility by 4 and 8

Number	Last 2 digits	÷4?	Last 3 digits	÷8?
(a) 26048	$48 \div 4 = 12$	Yes	$048 \div 8 = 6$	Yes
(b) 40825	$25 \div 4 = \text{No}$	No	$825 \div 8$	No
(c) 265432	$32 \div 4 = 8$	Yes	$432 \div 8 = 54$	Yes
(d) 3654326	$26 \div 4 = \text{No}$	No	$326 \div 8 =$	No
(e) 683248	$48 \div 4 = 12$	Yes	$248 \div 8 = 31$	Yes
(f) 4325824	$24 \div 4 = 6$	Yes	$824 \div 8 = 103$	Yes

2. Divisibility by 11

Number	Calculation	÷11?
(a) 6215	$(6+1)-(2+5) = 7-7 = 0$	Yes
(b) 7318	$(7+1)-(3+8) = 8-11 = -3$	No
(c) 620015	$(6+0+1)-(2+0+5) = 7-7 = 0$	Yes
(d) 724836	$(7+4+3)-(2+8+6) = 14-16 = -2$	No
(e) 671979	$(6+1+7)-(7+9+9) = 14-25 = -11$	Yes
(f) 6264832	$(6+6+8+2)-(2+4+3) = 22-9 = 13$	No

3. Divisibility by 12

Number	÷3? (digit sum)	÷4? (last 2 digits)	÷12?
(a) 4380	15	$80 \div 4 = 20$	Yes
(b) 15076	19	$76 \div 4 = 19$	No
(c) 83448	27	$48 \div 4 = 12$	Yes
(d) 30552	15	$52 \div 4 = 13$	Yes
(e) 71809	25	$09 \div 4$	No

4. Divisibility by 15

Number	$\div 3? \div 5?$	(ends 0/5)	$\div 15?$
(a) 10275	15	Yes (5)	Yes
(b) 85,475	29	Yes (5)	No
(c) 89760	30	Yes (0)	Yes
(d) 249360	24	Yes (0)	Yes
(e) 190275	24	Yes (5)	Yes

5. Replace D (smallest digit) to make divisible by 3

Number	Known sum	D needed
(a) 76D47	$7+6+4+7=24$	$24+D \text{ div by } 3 \rightarrow D = 0$
(b) 17D475	$1+7+4+7+5=24$	$D = 0$
(c) 298D	$2+9+8=19$	$19+D \text{ div by } 3 \rightarrow D = 2$
(d) D9197	$9+1+9+7=26$	$26+D \text{ div by } 3 \rightarrow D = 1$

6. Replace D (smallest digit) to make divisible by 11

Number	Alternating sum	D value
(a) 6D5845	Odd pos: $6+5+4=15$;	2
(b) 29D0478	Odd: $2+D+4+8=D+14$; Even: $9+0$	2
(c) 768D94	Odd: $7+8+9=24$;	3
(d) D59945	Odd: $D+9+4=D+13$;	6

Let's Do 4.2 — HCF

1. HCF by Prime Factorisation

- (a) 84, 9884 $=2^2 \times 3 \times 7$; $98=2 \times 7^2 \rightarrow 14$
(b) 58, 7058 $=2 \times 29$; $70=2 \times 5 \times 7 \rightarrow 2$
(c) 84, 12084 $=2^2 \times 3 \times 7$; $120=2^3 \times 3 \times 5 \rightarrow 12$
(d) 108, 180108 $=2^2 \times 3^3$; $180=2^2 \times 3^2 \times 5 \rightarrow 36$
(e) 210, 480210 $=2 \times 3 \times 5 \times 7$; $480=2^5 \times 3 \times 5 \rightarrow 30$
(f) 85, 48085 $=5 \times 17$; $480=2^5 \times 3 \times 5 \rightarrow 5$
(g) 170, 238170 $=2 \times 5 \times 17$; $238=2 \times 7 \times 17 \rightarrow 34$
(h) 72, 108, 18072 $=2^3 \times 3^2$; $108=2^2 \times 3^3$; $180=2^2 \times 3^2 \times 5 \rightarrow 36$
(i) 252, 630252 $=2^2 \times 3^2 \times 7$; $630=2 \times 3^2 \times 5 \times 7 \rightarrow 126$

2. HCF by Division Method

- (a) 90, 72 HCF = 18
(b) 120, 158 HCF = 2
(c) 391, 425 HCF = 17
(d) 45, 89 HCF = 1
(e) 180, 252, and 576 HCF = 36
(f) 658, 940, 1128 HCF = 94
(g) 115, 230 HCF = 115
(h) 256, 384 HCF = 128

Let's Do 4.3

1. Find LCM

- (a) 42, 63 $\text{LCM} = 42 = 2 \times 3 \times 7$; $63 = 3^2 \times 7 \rightarrow 126$
(b) 12, 18, 20 $\text{LCM} = 180$
(c) 36, 60, 72 $\text{LCM} = 360$
(d) 28, 36, 45, 60 $\text{LCM} = 1260$

2. Find HCF and LCM

- (a) 117, 221 $\text{HCF} = 13$ $\text{LCM} = 1989$
(b) 234, 572 $\text{HCF} = 26$ $\text{LCM} = 5148$
(c) 693, 1078 $\text{HCF} = 77$ $\text{LCM} = 9702$
(d) 861, 1353 $\text{HCF} = 123$ $\text{LCM} = 9471$

3. Product = 2560, LCM = 320 $\rightarrow$ HCF = $2560 \div 320 = 8$

4. LCM = 1449, HCF = 23, one number = 161

$$\text{Other number} = (1449 \times 23) \div 161 = 33327 \div 161 = 207$$

5. Smallest number divisible by 20, 24, 32, 36 $\text{LCM}(20, 24, 32, 36) = 288$

6. Greatest 5-digit number divisible by 9, 12, 15, 18, 24

$$\text{LCM} = 360; \text{Greatest 5-digit multiple} = 99720 \div 360 = 277 \times 360 = 99720$$

7. Product = 8000, LCM = 800 $\rightarrow$ HCF = $8000 \div 800 = 10$

8. Smallest number which when diminished by 3 is divisible by 21, 28, 36, 45

$$\text{LCM}(21, 28, 36, 45) = 1260; \text{Answer} = 1260 + 3 = 1263$$

Let's Revise

1. All multiples of 2 are called even numbers.
2. A whole number not exactly divisible by 2 is called an odd number.
3. A number having only two factors is called a prime number.
4. 2 is the only even prime number.
5. 1 is a unique number because it has only one factor.
6. Two prime numbers differing by 2 are called twin primes.
7. Multiples of a given number are infinite.
8. Every number has a finite number of factors.
9. Prime numbers between 40 and 50 are 41, 43, 47.
10. Composite numbers between 1 and 20 are 4, 6, 8, 9, 10, 12, 14, 15, 16, 18.

11. Smallest digit to make divisible by:

- (a) 5: 3062: 0, 2532 = 0.
(b) 3: 2, 2 48, 48 1 05, 317.
(c) 6 : 2 448, 8 0 52, 3 726.
(d) 4 ; 246 0, 90 0, 674 0.
(e) 8 : 432 0, 69 3, 6, 136.
(f) 9 : 6 3, 36, 4 4, 28, 846 0.

MCQ

1. (b) 8 2. (a) 0 3. (d) 11



FRACTIONS

Task-1

1. Write the fraction for the shaded part Image 1

- (a) $2/6 = 1/3$ (2 of 6 parts shaded) (b) $4/8 = 1/2$ (4 of 8 parts shaded)
(c) $1/5$ (1 of 5 parts shaded) (d) $2/3$ (2 of 3 parts shaded)
(e) $1/4$ (1 of 4 parts shaded) (f) $3/5$ (3 of 5 rows shaded)

Task-2

1. Find :

- (a) $9/3$ of $5 = 3 \times 5 = 15$
(b) $7 \frac{1}{2}$ of $7 = 15/2 \times 7 = 52 \frac{1}{2}$
(c) $3 \frac{2}{7}$ of $5 = 23/7 \times 5 = 115/7 = 16 \frac{3}{7}$
(d) $7/5$ of $10 = 14$
(e) $19/15$ of $75 = 95$
(f) $9 \frac{1}{3}$ of $93 = 28/3 \times 93 = 868$
(g) $12/13$ of $7 = 84/13 = 6 \frac{6}{13}$
(h) $11 \frac{2}{3}$ of $4 = 35/3 \times 4 = 140/3 = 46 \frac{2}{3}$
(i) $5 \frac{1}{6}$ of $11 = 31/6 \times 11 = 341/6 = 56 \frac{5}{6}$

2. Find the products

- (a) $5/3 \times 8/9 = 40/27 = 1 \frac{13}{27}$
(b) $3 \frac{1}{3} \times 3/5 = 10/3 \times 3/5 = 2$
(c) $4 \times 7 \frac{1}{2} = 29/7 \times 15/2 = 435/14 = 31 \frac{1}{14}$
(d) $6 \frac{1}{5} \times 2 \frac{1}{4} = 31/5 \times 9/4 = 279/20 = 13 \frac{19}{20}$
(e) $8 \frac{1}{5} \times 20/3 = 41/5 \times 20/3 = 820/15 = 54 \frac{2}{3}$
(f) $56 \times 1 = 56$

Let's Do 5.1

1. Properties of multiplication (fill blanks)

- (a) $3/5 \times 1/3 = 1/3 \times 3/5$
(b) $13/7 \times 18/3 = 18/3 \times 13/7$
(c) $17 \frac{19}{19} \times 13 \frac{2}{7} = 13 \frac{2}{7} \times 17 \frac{19}{19}$ (commutative)
(d) $18 \frac{1}{6} \times 5 \frac{1}{34} = 5 \frac{1}{34} \times 18 \frac{1}{6}$ (commutative)

2. Simplify

- (a) $3 \frac{1}{2} \times 4 \frac{3}{5} \times 1 = 7/2 \times 23/5 = 161/10 = 16 \frac{1}{10}$
(b) $5 \frac{3}{9} \times 0 \times 6 \frac{1}{5} \times 18 \frac{1}{3} = 0$
(c) $5/8 \times 1 = 5/8$
(d) $11/9 \times 0 = 0$
(e) $12 \frac{3}{19} \times 3 \times 8 \frac{1}{6} = 231/19 \times 3 \times 53/6 = 36603/114 = 321 \frac{1}{114}$
(f) $11 \times 14 \frac{2}{7} \times 1 = 78/7 \times 100/7 = 7800/49 = 159 \frac{19}{49}$

3. Shade fractions (description)

- (a) $\frac{1}{2}$ of 8 Shade 4 squares
- (b) $\frac{3}{4}$ of 4 Shade 3 triangles
- (c) $\frac{3}{5}$ of 20 Shade 12 squares
- (d) $\frac{3}{8}$ of 8 Shade 3 sections

4. Simplify

- (a) $3\frac{1}{5} \times 10 = 16/5 \times 10 = 32$
- (b) $7/3 \times 1/7 \times 4/5 = 28/105 = 4/15$
- (c) $15\frac{1}{3} \times 1\frac{1}{4} \times 0 \times 8 = 0$
- (d) $13\frac{1}{3} \times 4\frac{1}{4} \times 0 \times 7 = 0$
- (e) $63/115 \times 20/54 = 1260/6210 = 2/9\frac{3}{4} \rightarrow 14/69$
- (f) $2/33 \times 66/77 \times 21/2 = 2772/5082 = 6/11$
- (g) $3\frac{1}{5} \times 6\frac{1}{2} \times 6\frac{1}{4} = 16/5 \times 13/2 \times 25/4 = 5200/40 = 130$
- (h) $13\frac{1}{2} \times 2 \times 6/54 = 27/2 \times 2 \times 1/9 = 27/9 = 3$

5. Fill in the blanks

- (a) $1/6 \times ? = 1 \rightarrow 6$
- (b) $14/1 \times ? = 1 \rightarrow 1/14$
- (c) Reciprocal of $5/6 = 6/5$
- (d) Multiplicative inverse of $32 = 1/32$
- (e) Multiplicative inverse of $0 =$ Does not exist
- (f) Reciprocal equal to itself = 1
- (g) Reciprocal of whole number = proper fraction
- (h) Mult. inverse of mixed number = proper fraction

Task-3

1. Divide Image 4

- (a) $\frac{3}{4} \div 4 = 3/16$
- (b) $3/14 \div 6 = 3/84 = 1/28$
- (c) $2\frac{2}{5} \div 2 = 12/5 \div 2 = 6/5 = 1\frac{1}{5}$
- (d) $3 \div 14 = 22/7 \div 14 = 22/98 = 11/49$
- (e) $13/5 \div 36 = 13/180$
- (f) $49/6 \div 42 = 49/252 = 7/36$
- (g) $14\frac{1}{4} \div 7 = 57/4 \div 7 = 57/28 = 2\frac{1}{28}$
- (h) $16\frac{3}{4} \div 4 = 67/4 \div 4 = 67/16 = 4\frac{3}{16}$

2. Fill using properties

- (a) $81/41 \div 1 = 81/41$
- (b) $0 \div 53/59 = 0$
- (c) $16/85 \div 16/85 = 1$
- (d) $25/4 \div 0 =$ undefined (∞)
- (e) $2\frac{1}{8} \div 0 =$ undefined (∞)
- (f) $63\frac{1}{2} \div 1 = 63\frac{1}{2}$
- (g) $53/11 \div 53/11 = 1$
- (h) $16\frac{1}{4} \div 65/4 = 65/4 \div 65/4 = 1$

Let's Do 5.2

1. Simplify (division)

- (a) $2/3 \div 6/5 = 2/3 \times 5/6 = 10/18 = 5/9$
- (b) $3 \div 21/2 = 22/7 \times 2/21 = 44/147$
- (c) $4\frac{2}{3} \div 3\frac{5}{8} = 14/3 \times 5/16 = 70/48 = 35/24 = 1\frac{11}{24}$
- (d) $14/9 \div 28/2 = 14/9 \times 2/28 = 28/252 = 1/9$
- (e) $12/11 \div 72/66 = 12/11 \times 66/72 = 792/792 = 1$
- (f) $17/23 \div 51/46 = 17/23 \times 46/51 = 782/1173 = 2/3$
- (g) $6\frac{1}{8} \div 5\frac{1}{16} = 49/8 \times 16/81 = 784/648 = 98/81 = 1\frac{17}{81}$
- (h) $2\frac{1}{4} \div 5\frac{1}{28} = 9/4 \times 28/141 = 252/564 = 63/141 = 9/ \approx 63/141$

2. Solve

- (a) $18 \div \frac{1}{2} = 18 \times 2 = 36$
- (b) $25 \div 1\frac{3}{8} = 25 \times 5/8 = 125/8 = 15\frac{5}{8}$
- (c) $40 \div \frac{3}{4} = 40 \times 4/3 = 160/3 = 53\frac{1}{3}$
- (d) $60 \div 2\frac{1}{2} = 60 \times 2/5 = 24$
- (e) $35 \div 5/3 = 35 \times 3/5 = 21$
- (f) $23 \div 46/7 = 23 \times 7/46 = 161/46 = 3\frac{1}{2}$
- (g) $16\frac{1}{6} \div 7/24 = 97/6 \times 24/7 = 2328/42 = 388/7 = 55\frac{3}{7}$
- (h) $81 \div 81/34 = 81 \times 34/81 = 34$

3. Find the quotient

- (a) $6 \div 3/5 = 6 \times 5/3 = 10$
- (b) $2\frac{1}{2} \div 1/11 = 5/2 \times 11 = 55/2 = 27\frac{1}{2}$
- (c) $5/6 \div 10/18 = 5/6 \times 18/10 = 90/60 = 3/2 = 1\frac{1}{2}$
- (d) $5\frac{3}{4} \div 3/4 = 23/4 \times 4/3 = 23/3 = 7\frac{2}{3}$
- (e) $2 \div 2/5 = 2 \times 5/2 = 5$
- (f) $5\frac{1}{2} \div 2\frac{3}{8} = 11/2 \times 8/19 = 88/38 = 44/19 = 2\frac{6}{19}$
- (g) $64 \div 64 = 1$
- (h) $97 \div 194/66 = 97 \times 66/194 = 6402/194 = 33$

Let's Do 5.3

Simplify (BODMAS)

- (1) $6/14 \times 28/15 - 6/35 \text{ of } 3\frac{1}{3} = 12/15 - 6/35 \times 10/3 = 4/5 - 4/7 = 28/35 - 20/35 = 8/35$
- (2) $5\frac{1}{3} \div 3/5 \text{ of } 14/9 + 5/3 = 16/3 \div (3/5 \times 14/9) + 5/3 = 16/3 \div 14/15 + 5/3$
 $= 16/3 \times 15/14 + 5/3 = 240/42 + 5/3 = 40/7 + 5/3 = 120/21 + 35/21$
 $= 155/21 = 7\frac{8}{21}$
- (3) $11/5 + 4/21 \text{ of } 63 - 18/5 \div 27/35 = 11/5 + 12 - 18/5 \times 35/27 = 11/5 + 12$
 $- 14/3 = 33/15 + 180/15 - 70/15 = 143/15 = 9\frac{8}{15}$
- (4) $3/15 + 13/15 \times 3\frac{6}{15} \div 1\frac{1}{3} = 1/5 + 13/15 \times 51/15 \times 3/4 = 1/5 + 663/300$
 $= 60/300 + 663/300 = 723/300 = 241/100 = 2\frac{41}{100}$
- (5) $7/11 \times 2\frac{1}{5} \div 8/15 = 7/11 \times 11/5 \times 15/8 = 7 \times 11 \times 15 / (11 \times 5 \times 8) = 1155/440$
 $= 21/8 = 2\frac{5}{8}$

- (6) $4/7 \div [2\frac{2}{7} - 4/14] = 4/7 \div [16/7 - 2/7] = 4/7 \div 14/7 = 4/7 \times 7/14 = 4/14 = 2/7$
- (7) $\{(11\frac{1}{3} - 2/9) \div 5/18\} \text{ of } (3/8 + \frac{1}{4}) = \{(34/3 - 2/9) \div 5/18\} \text{ of } 5/8$
 $= \{(102/9 - 2/9) \times 18/5\} \times 5/8 = \{100/9 \times 18/5\} \times 5/8 = 40 \times 5/8 = 25$
- (8) $3\frac{1}{2} \div [\{\frac{1}{4} - (\frac{1}{6} - 1/12)\} + 1/15] = 7/2 \div [\{\frac{1}{4} - 1/12\} + 1/15] = 7/2 \div [2/12 + 1/15] = 7/2 \div [1/6 + 1/15] = 7/2 \div [5/30 + 2/30] = 7/2 \div 7/30 = 7/2 \times 30/7 = 15$
- (9) $6/7 \div 5/7 \times 8/11 = 6/7 \times 7/5 \times 8/11 = 6 \times 8 / (5 \times 11) = 48/55$
- (10) $12/21 \text{ of } 3 + 5/16 \div 5/8 - 4/3 = 4/7 \times 3 + 5/16 \times 8/5 - 4/3 = 12/7 + \frac{1}{2} - 4/3 = 72/42 + 21/42 - 56/42 = 37/42$
- (11) $15/21 \text{ of } 2/3 - 1/15 \div 3/7 = 5/7 \times 2/3 - 1/15 \times 7/3 = 10/21 - 7/45 = 150/315 - 49/315 = 101/315$
- (12) $\frac{3}{4} \text{ of } 16/27 + 23/14 + 12/18 = 4/9 + 23/14 + 2/3 = 56/126 + 207/126 + 84/126 = 347/126 = 2\frac{95}{126}$
- (13) $(\frac{1}{5} + \frac{1}{5}) \times 3\frac{1}{3} = 2/5 \times 10/3 = 20/15 = 4/3 = 1\frac{1}{3}$
- (14) $6 + \{\frac{1}{3} + 2/9 + (5/4 \div 2\frac{1}{2})\} = 6 + \{3/9 + 2/9 + (5/4 \times 2/5)\} = 6 + \{5/9 + \frac{1}{2}\} = 6 + \{10/18 + 9/18\} = 6 + 19/18 = 108/18 + 19/18 = 127/18 = 7\frac{1}{18}$
- (15) $3\frac{1}{2} \div [\{\frac{1}{4} - (\frac{1}{6} - 1/12)\} + 1/15] = \text{Same as (8)} = 15$

Let's Do 5.4

Word problem

- (1) How many one-fourths in 100? $100 \div \frac{1}{4} = 400$
- (2) $3/7 \times \text{number} = 18$ number $= 18 \times 7/3 = 42$
- (3) $6/7 \text{ of number} = 42$ number $= 42 \times 7/6 = 49$
- (4) $3/5 \text{ of } 30 \text{ are boys. Girls? Boys} = 18, \text{ Girls} = 30 - 18 = 12$
- (5) 3 people each ate $\frac{1}{4}$ of 8-slice pizza Eaten $= 3 \times (\frac{1}{4} \times 8) = 3 \times 2 = 6$ slices.
 Remaining $= 8 - 6 = 2$ slices
- (6) Distance 125 km, bus covers 25 km Covered $= 25/125 = 1/5$. Still to cover $= 4/5$
- (7) 120 students: $\frac{1}{3}$ Hindi, $2/5$ Sanskrit, rest French Hindi $= 40$, Sanskrit $= 48$, French $= 120 - 88 = 32$
- (8) $20 \div \frac{1}{2} - 20 = 40 - 20 = 20$

Let's Revise

1. Fill in the blanks

- (a) $2/5 + 1/5 = 3/5$ (b) $13/17 - 2/17 = 11/17$
 (c) $15/4 - 1/4 = 14/4 = 7/2 = 3\frac{1}{2}$ (d) $21/5 - 3/5 = 18/5 = 3\frac{3}{5}$
 (e) $18/7 + ? = 22/7 = 4/7$ (f) $40/13 - ? = 3/13 = 37/13$

2. Simplify to lowest terms

- (a) $12/3 + 21/9 = 4 + 7/3 = 19/3 = 6\frac{1}{3}$
- (b) $18/5 - 19/15 = 54/15 - 19/15 = 35/15 = 7/3 = 2\frac{1}{3}$
- (c) $\frac{1}{2} + 3\frac{1}{5} + 4\frac{1}{4} = 10/20 + 64/20 + 85/20 = 159/20 = 7\frac{19}{20}$
- (d) $45/3 - 36/6 = 15 - 6 = 9$
- (e) $6/7 + 3\frac{1}{14} + 1\frac{2}{21} = 18/21 + 65/21 + 23/21 = 36/42 + 129/42 + 44/42 = 209/42 = 4\frac{41}{42}$
- (f) $5\frac{1}{5} - 12/10 = 26/5 - 6/5 = 20/5 = 4$

3. Find

- (a) $12/3 \times 5 = 4 \times 5 = 20$
- (b) $13\frac{1}{2}$ of $8 = 27/2 \times 8 = 108$
- (c) $5\frac{2}{7}$ of $4 = 37/7 \times 4 = 148/7 = 21$
- (d) $13\frac{3}{4} \times 12 = 53/4 \times 12 = 636/4 = 159$
- (e) $21/15$ of $45 = 7/5 \times 45 = 63$
- (f) $12\frac{1}{3} \times 93 = 37/3 \times 93 = 3441/3 = 1147$
- (g) $4/7$ of $56 = 4 \times 8 = 32$
- (h) $8\frac{1}{6}$ of $60 = 49/6 \times 60 = 490$

4. Find the product

- (a) $2/5 \times 5/9 = 10/45 = 2/9$
- (b) $3\frac{1}{3} \times \frac{1}{5} = 10/3 \times 1/5 = 2/3$
- (c) $7\frac{1}{5} \times 20/5 = 36/5 \times 4 = 144/5 = 28\frac{4}{5}$
- (d) $42 \times 14/3 = 295/7 \times 14/3 = 4130/21 = 196\frac{14}{21}$

5. Multiplication properties (fill blanks)

- (a) $3/2 \times 1/4 = 1/4 \times 3/2$
- (b) $16/7 \times 18/3 = 18/3 \times 16/7$
- (c) $16\frac{1}{5} \times 14\frac{2}{7} = 14\frac{2}{7} \times 16\frac{1}{5}$
- (d) $15\frac{1}{6} \times 6\frac{1}{15} = 6\frac{1}{15} \times 15\frac{1}{6}$

6. Simplify

- (a) $2\frac{1}{2} \times 3\frac{3}{6} \times 1 = 5/2 \times 7/2 = 35/4 = 8\frac{3}{4}$
- (b) $16\frac{2}{9} \times 0 \times 3\frac{6}{5} \times 14\frac{1}{3} = 0$
- (c) $5/3 \times 1 = 5/3 = 1\frac{2}{3}$
- (d) $12 \times 13\frac{3}{7} \times 1 = 85/7 \times 94/7 = 7990/49 = 163\frac{33}{49}$

MCQ

- (1) (b) $19/5$ (2) (a) 7 (3) (a) 30



DECIMALS

Task-1

1. Expanded form

- (a) $2432.168 = 2000 + 400 + 30 + 2 + 1/10 + 6/100 + 8/1000$
- (b) $1423.05 = 1000 + 400 + 20 + 3 + 0/10 + 5/100$
- (c) $36.0183 = 30 + 6 + 0/10 + 1/100 + 8/1000 + 3/10000$
- (d) $413.2 = 400 + 10 + 3 + 2/10$
- (e) $263.032 = 200 + 60 + 3 + 0/10 + 3/100 + 2/1000$
- (f) $546.008 = 500 + 40 + 6 + 0/10 + 0/100 + 8/1000$

2. Decimal form

- (a) 5008.28 (b) 3002.41 (c) 260.708 (d) 26.054 (e) 325.08
(f) 961.304 (g) 450.62

Let's Do 6.1

1. Like decimals (add trailing zeros)

- (a) 0.310 ; 10.429 ; 39.637 ; 182.800
(b) 43.010 ; 340.300 ; 4346.105 ; 480.190
(c) 13.130 ; 1183.100 ; 28.300 ; 1.100
(d) 30.12 ; 31.00 ; 31.10 ; 3296.00
(e) 36.300 ; 33.010 ; 49.435 ; 31.020
(f) 63.040 ; 84.300 ; 681.432

2. Greater fraction

- (a) 231.91 (b) 292.44 (c) 6183.43 (d) 148.653
(e) 163.071 (f) 2143.21

3. Ascending order

- (a) $3.926 < 16.234 < 16.324 < 16.428 < 16.528$
(b) $42.09 < 42.17 < 42.19 < 42.81 < 42.91$
(c) $203.03 < 203.13 < 203.30 < 203.31$
(d) $107.05 < 107.25 < 107.50 < 107.52$
(e) $85.08 < 85.18 < 85.80 < 85.81$
(f) $89.07 < 89.077 < 89.70 < 89.77$

4: Convert to fractions

- (a) $83246/1000$ (b) $34525/100$ (c) $50026/100$
(d) $632515/100$ (e) $4300205/1000$ (f) $2055/10$
(g) $42085/1000$ (h) $26143/10$

5. Convert to decimals

- (a) 13.5 (b) 16.89 (c) 0.025
(d) 4.683 (e) 24.89 (f) 0.005
(g) 0.03 (h) 0.0001

Let's Do 6.2

1. Addition

- (a) $108.21 + 25.025 + 100.002 + 443.35 = 676.587$
(b) $6.035 + 3612.007 + 40.71 + 24.9142 = 3683.6662$
(c) $25.71 + 361.001 + 4321.1945 + 8.09 = 4715.9955$
(d) $21.91 + 101.431 + 941.01 = 1064.351$

2. Sum

(a) ₹3.95+₹23.05+₹234.75+₹421.50 = ₹683.25

(b) 148.501+2612.915+1143.089 = 3904.505 L

3. Subtraction

(a) 94.519 – 23.053 = 71.466

(b) 85.50 – 48.75 = 36.75

(c) 234 kg 843 g – 65 kg 753 g = 169 kg 90 g

(d) 154.1 – 83.05 = 71.05

4. Difference

(a) 131.51 m

(b) 40.05 L

(c) 2.0156

(d) 769.065 g

(e) ₹27.30

(f) 11.102 L

Task-3

1. Multiplication fill in blanks

(a) 24.4

(b) 3.6

(c) 4.2

(d) 33

(e) 32132

(f) 6105

2. Properties of multiplication

(a) 0.2×31

(b) $5.4 \times 2.63 \times 3.2$

(c) $0 \times 14323.103 = 0$

(d) 1×5231.2

(e) 1.3×5.326

(f) $8.9 \times 1.5 \times 7.9$

(g) $63 \times 98.193 \times 3.65 \times 0 = 0$

Let's Do 6.3

1. Products

(a) 396.2

(b) 5191.44

(c) 13196.4

(d) 3214.8

(e) 6211.5

(f) 2813320

2. Decimal × Decimal

(a) 0.36

(b) 0.3612

(c) 2.62

(d) 1.624

(e) 2.31

(f) 0.0064

3. Products

(a) 408.125

(b) 71.7738

(c) 508.2421

(d) 225.4464

(e) 666.5352

(f) 594.0198

4. Quotients

(a) 0.9

(b) 0.7

(c) 0.012

(d) 0.6

5. Division

(a) 1.3

(b) 25.7

(c) 6.6

(d) 100.01

(e) 52.3

(f) 5.64

(g) 0.000001

Task-4

1. Fill in the blanks:

(a) $18.1 \div 10 = 1.81$

(b) $62.05 \div 10 = 6.205$

(c) $2.3 \div 100 = 0.023$

(d) $63.8 \div 100 = 0.638$

(e) $32.5 \div 1000 = 0.0325$

(f) $482.35 \div 10,000 = 0.048235$

2. Divide the following:

- | | |
|-----------------------------------|--------------------------------|
| (a) $300.4 \div 200 = 1.502$ | (b) $7392.6 \div 900 = 8.214$ |
| (c) $2313.300 \div 3000 = 0.7711$ | (d) $403.64 \div 20 = 20.182$ |
| (e) $368.2 \div 70 = 5.26$ | (f) $738.9 \div 9000 = 0.0821$ |
| (g) $151.26 \div 600 = 0.2521$ | (h) $25.952 \div 80 = 0.3244$ |

3. Division by decimals

- | | |
|-----------------------------------|--------------------------------|
| (a) $1407 \div 351.75 = 4$ | (b) $48 \div 1.92 = 25$ |
| (c) $5776 \div 1.444 = 4000$ | (d) $162 \div 40.5 = 4$ |
| (e) $5115 \div 0.003 = 1,705,000$ | (f) $4860 \div 0.09 = 54,000$ |
| (g) $1545 \div 0.012 = 128,750$ | s(h) $1331 \div 0.11 = 12,100$ |

4. Divide the following

- | | |
|------------------------------------|---|
| (a) $5/8 = 0.625$ | (b) $2 \frac{9}{50} = 109/50 = 2.18$ |
| (c) $2 \frac{3}{4} = 11/4 = 2.75$ | (d) $11/20 = 0.55$ |
| (e) $16 \frac{1}{5} = 81/5 = 16.2$ | (f) $3 \frac{1}{4} = 13/4 = 3.25$ |
| (g) $3/20 = 0.15$ | (h) $20 \frac{19}{20} = 419/20 = 20.95$ |

Task-5

1. Simplify

- (a) $5 \times 6 \div 3 + 2 = 30 \div 3 + 2 = 10 + 2 = 12$
- (b) $2.4 \times 14.3 \text{ of } 0.2 \div 4 = 2.4 \times 2.86 \div 4 = 6.864 \div 4 = 1.716$
- (c) $17.2 + 13.4 - (11.2 \times 2.2) + 1.2 \div 0.06 = 17.2 + 13.4 - 24.64 + 20 = 25.96$
- (d) $4 - 0.4 \times (0.4 + 0.7) = 4 - 0.4 \times 1.1 = 4 - 0.44 = 3.56$
- (e) $(6.6 - 4.6) \div (7/8 \div 3.5) = 2 \div (0.875 \div 3.5) = 2 \div 0.25 = 8$
- (f) $8.5 - \{4.07 - (1.2 - 0.9)\} \text{ of } 1.4 = 8.5 - \{4.07 - 0.3\} \times 1.4 = 8.5 - 3.77 \times 1.4 = 8.5 - 5.278 = 3.222$
- (g) $16 \div 4 + 5 \div 10 \times 1.5 - 2 = 4 + 0.5 \times 1.5 - 2 = 4 + 0.75 - 2 = 2.75$
- (h) $5 \times [5.2 + \{35.7 - 5.6 \text{ of } (12.6 \div 4.2)\}] = 5 \times [5.2 + \{35.7 - 5.6 \times 3\}] = 5 \times [5.2 + \{35.7 - 16.8\}] = 5 \times [5.2 + 18.9] = 5 \times 24.1 = 120.5$

2. Ram has ₹854 : Gave $1/4$ to son = $854 \times 1/4 = ₹213.50$

Gave $1/2$ to wife = $854 \times 1/2 = ₹427$

Kept for himself = $854 - 213.50 - 427 = ₹213.50$

3. Bike petrol consumption: $43.26 \div 14 = 3.09$ litres per day

4. Bangles: Anjali: $5 \times ₹125.70 = ₹628.50$ Tina: $6 \times ₹153 = ₹918$

Anjali paid less by $₹918 - ₹628.50 = ₹289.50$

5. Hari's travel: By bike = $32.05 - 2.5 - 14.5 = 15.05$ km

Task-6 (Rounding)

1. Round to nearest ones:

- | | | | |
|--------------|---------------|----------------|------------------|
| (a) 38.23838 | (b) 11.50612 | (c) 263.352263 | (d) 4635.2094635 |
| (e) 63.28763 | (f) 420.83421 | (g) 635.27635 | (h) 6381.996382 |

2. Round to 1 decimal place:

- (a) 89.4989.5 (b) 5.935.9 (c) 145.04145.0 (d) 30.71530.7
(e) 18.33718.3 (f) 29.9129.9 (g) 43.3843.4 (h) 243.75243.8

3. Round to 2 decimal places:

- (a) 3.6133.61 (b) 18.07518.08 (c) 82.73682.74
(d) 363.363363.36 (e) 43.33743.34 (f) 320.013320.01
(g) 423.329423.33 (h) 99.98999.99

Let's Revise

1. Add:

- (a) $14.836 + 2.01632 + 742.00372 = 758.85604$
(b) $13.400 + 15.620 + 18.375 = 47.395$ km

2. Divide:

- (a) $165.75 \div 25 = 6.63$ (b) $9.6 \div 0.24 = 40$ (c) $68 \div 4.25 = 16$
(d) $44 \div 16 = 2.75$

3. Convert 7/20 to decimal = 0.35

4. Simplify: $268 \times [58 \div \{55 + (19 - 16)\}] = 268 \times [58 \div \{55 + 3\}] = 268 \times [58 \div 58]$ $= 268 \times 1 = 268$

5. Cost of 13 watches = $13 \times ₹2054 = ₹26,702$

6. Buckets = $302.88 \div 50.48 = 6$ buckets

7. $9/19 = 0.473$ (to three decimal places)

8. $\sqrt{2.25} = 1.5$

MCQ

1. (c) 88.888 2. (a) 19.6 3. (b) 379



PERCENTAGE

Task-1:

Fractions Decimals Table

	Percent	Fraction	Decimal
1.	52%	$52/100 = 13/25$	0.52
2.	47%	$47/100$	0.47
3.	20%	$20/100 = 1/5$	0.20
4.	26%	$26/100 = 13/50$	0.26

Let's Do 7.1

1. Write as percent:

(a) $23/100 = 23\%$

(b) $45/100 = 45\%$

(c) $13/100 = 13\%$

(d) $9/100 = 9\%$

(e) $42/100 = 42\%$

2. Convert into fractions:

(a) $52\% = 52/100 = 13/25$

(b) $94\% = 94/100 = 47/50$

(c) $20\% = 20/100 = 1/5$

(d) $135\% = 135/100 = 27/20$

(e) $42\% = 42/100 = 21/50$

(f) $245\% = 245/100 = 49/20$

3. Shaded % of rectangle:

(a) 1 out of 2 parts shaded $\rightarrow 50\%$

(b) 1 out of 4 parts shaded $\rightarrow 25\%$

(c) 2 out of 4 parts shaded $\rightarrow 50\%$

4. Express as percent:

(a) $17/4 = 4.25 \times 100 = 425\%$

(b) $23/4 = 5.75 \times 100 = 575\%$

(c) $96/5 = 19.2 \times 100 = 1920\%$

(d) $55/5 = 11 \times 100 = 1100\%$

(e) $34/8 = 4.25 \times 100 = 425\%$

Task -2

(a) $20\% \text{ of } 86 = (20/100) \times 86 = 17.2$

(b) $25\% \text{ of } 60 = 15$

(c) $31\% \text{ of } 200 = 62$

(d) $15\% \text{ of } ₹500 = ₹75$

(e) $60\% \text{ of } 120 \text{ m} = 72 \text{ m}$

(f) $8\% \text{ of } 1000 \text{ l} = 80 \text{ l}$

(g) $50\% \text{ of } 1500 \text{ kg} = 750 \text{ kg}$

(h) $25\% \text{ of } 160 \text{ g} = 40 \text{ g}$

Let's Do 7.2

1. Find what %:

(a) $33 \text{ of } 66 = (33/66) \times 100 = 50\%$

(b) $₹50 \text{ of } ₹150 = 33.33\%$

(c) $400 \text{ g of } 1200 \text{ g} = 33.33\%$

(d) $3.4 \text{ m of } 340 \text{ cm} \rightarrow 3.4 \text{ m} = 340 \text{ cm} \rightarrow 100\%$

(e) $₹800 \text{ of } ₹2400 = 33.33\%$

2. **Rajesh's marks:** $92\% \text{ of } 750 = (92/100) \times 750 = 690 \text{ marks}$

3. **Absentees:** Present = $30\% \text{ of } 50 = 15 \rightarrow$ Absentees = $50 - 15 = 35 \text{ students}$

4. **Paul's spending:** Saves $24\% \rightarrow$ Spends $76\% \text{ of } ₹32,000 = ₹24,320$

5. **Adults in village :** Children = $16\% \text{ of } 3600 = 576 \rightarrow$ Adults = $3600 - 576 = 3,024$

6. **Sandhya's weight:** = $45 + 15\% \text{ of } 45 = 45 + 6.75 = 51.75 \text{ kg}$

7. **Anish's spending:** Bills = $15\% \text{ of } ₹8000 = ₹1200$; Groceries = $10\% \text{ of } ₹8000 = ₹800$
Total = ₹2,000

8. **TV price decrease %:** Decrease = ₹3,300; % = $(3300/16000) \times 100 = 20.625\%$

Let's Revise

1. $12\frac{1}{2}\% \text{ of } 568 = (25/2)/100 \times 568 = 71$

2. $20\% \text{ less than } 160 = 160 - 32 = 128$

3. % of 50 is 20 $\rightarrow (20/50) \times 100 = 40\%$

4. $15\% \text{ of } 60 = 9$; $18\% \text{ of } 90 = 16.2 \rightarrow 18\% \text{ of } 90 \text{ is more}$

5. Females+Males = $35\%+30\% = 65\% \rightarrow$ Children = $35\% \text{ of } 4500 = 1,575$

6. Savings = $20,000 - 11,500 = ₹8,500 \rightarrow (8500/20000) \times 100 = 42.5\%$

7. % increase = $(3000/6500) \times 100 = 46.15\%$

8. Seated = $85 - 25 = 60 \rightarrow (60/85) \times 100 = 70.6\%$

MCQ

1. (d) ₹362.50

2. $11 \frac{1}{9}\%$

3. (b) ₹700



PROFIT AND LOSS

Task-1:

Fill in the Blanks

Item	Cost Price	Selling Price	Difference	P/L
(a) Fridge	₹15,400	₹18,200	₹2,800	P
(b) Mixer grinder	₹6,500	₹5,500	1,000	L
(c) Toaster	₹3,000	₹3,150	₹150	P
(d) Pressure cooker	₹1,150	₹1,050	₹100	L
(e) Washing machine	₹11,000	₹10,850	₹150	L
(A) Profit items: Fridge, Toaster Total Profit = ₹2,800 + ₹150 = ₹2,950				
(B) Loss items: Mixer grinder, Pressure cooker, Washing machine				
Total Loss = ₹1,000 + ₹100 + ₹150 = ₹1,250				
(C) Total profit/loss: Net Profit = ₹2,950 – ₹1,250 = ₹1,700 (Profit)				

Task-2:

1. Fill the Table

S.No.	C.P.	S.P.	Profit	Loss
(a)	₹3,200	₹3,600	₹400	—
(b)	₹1,800	₹1,600	—	₹200
(c)	₹3,900	₹4,000	₹100	—
(d)	₹3,880	₹3,800	—	₹80
(e)	₹5,200	₹5,500	₹300	—

Let's Do 8.1

- CP = ₹16,700 ; Loss = ₹3,800 SP = CP – Loss = ₹12,900
- SP = ₹1,80,000 ; Loss = ₹65,000 CP = SP + Loss = ₹2,45,000
- SP = ₹24,000 ; Profit = ₹1,800 CP = SP – Profit = ₹22,200
- CP = ₹5,845 + ₹65 (transport) = ₹5,910 ; SP = ₹7,200
Profit = ₹7,200 – ₹5,910 = ₹1,290 (Profit)
- CP of 12 pencils = ₹120 ; SP = ₹15 × 12 = ₹180
Profit = ₹60 ; Profit% = $(60/120) \times 100 = 50\%$
- CP = ₹1,650 ; Profit = 20% Profit = ₹1,650 × 20/100 = ₹330
SP = ₹1,650 + ₹330 = ₹1,980
- CP = ₹1,600 ; Loss% = 25 Loss = ₹1,600 × 25/100 = ₹400
SP = ₹1,600 – ₹400 = ₹1,200
- CP = ₹70 ; SP = ₹5 × 20 = ₹100
Profit = ₹30 ; Profit% = $(30/70) \times 100 = 42.86\%$

Let's Revise

1. CP per pencil = $\text{₹}200/100 = \text{₹}2$; SP = $\text{₹}1.55$
Loss per pencil = $\text{₹}0.45 \rightarrow$ Loss of $\text{₹}0.45$ per pencil
2. CP = $\text{₹}600 + \text{₹}50 + \text{₹}145 = \text{₹}795$; SP = $\text{₹}1,000$ Gain = $\text{₹}205$
3. Total CP = $\text{₹}5,400 + \text{₹}600 = \text{₹}6,000$; Required SP = $\text{₹}6,000 + \text{₹}1,000 = \text{₹}7,000$ SP per mango = $\text{₹}7,000 \div 500 = \text{₹}14$ each
4. SP = $\text{₹}850 + \text{₹}75 = \text{₹}925$
5. Total eggs = 36 ; 6 broke, so 30 sold
SP of 30 eggs = $\text{₹}144 - \text{₹}30 = \text{₹}114$ SP per egg = $\text{₹}114 \div 30 = \text{₹}3.80$
6. CP = $\text{₹}240$; SP = $\text{₹}28 \times 10 = \text{₹}280$
Profit = $\text{₹}40$; Profit% = $(40/240) \times 100 = 16.67\%$
7. SP = $\text{₹}450 + (10\% \text{ of } \text{₹}450) = \text{₹}450 + \text{₹}45 = \text{₹}495$
8. Total SP = $\text{₹}50 \times 12 = \text{₹}600$; Total Loss = $\text{₹}50$ CP = $\text{₹}600 + \text{₹}50 = \text{₹}650$
CP per ball = $\text{₹}650 \div 12 = \text{₹}54.17$
9. CP = $\text{₹}10$; Profit = 30% SP = $\text{₹}10 + (30\% \text{ of } \text{₹}10) = \text{₹}10 + \text{₹}3 = \text{₹}13$



MEASUREMENT

Task-1

1. Convert 36 cm to dm, m, hm and km: 36 cm = 3.6 dm , 36 cm = 0.36 m
36 cm = 0.0036 hm, 36 cm = 0.00036 km
2. Convert 50 km to metres: 50 km = $50 \times 1000 = 50,000$ m
3. Express 14.5 m in dm, cm, mm, dam, hm, km: 14.5 m = 145 dm,
14.5 m = 1450 cm, 14.5 m = 14500 mm, 14.5 m = 1.45 dam
14.5 m = 0.145 hm, 14.5 m = 0.0145 km
4. Convert 96 km to hm and dam: 96 km = 960 hm, 96 km = 9600 dam
5. Convert 4236 m to hm, dam and dm: 4236 m = 42.36 hm, 4236 m = 423.6 dam
4236 m = 42360 dm

Let's Do 9.1

1. Arun bought 36.5 m of cloth $\rightarrow$ cm: $36.5 \times 100 = 3650$ cm
2. Ramya walked 3 km + 2000 m $\rightarrow$ total in km: 2000 m = 2 km Total = 3 + 2 = 5 km
3. Bhuvan: 6 m ribbon; Raj: 3000 cm ribbon: 3000 cm = 30 m, Raj bought more by
 $30 - 6 = 24$ m more
4. From sum of 62.54 m and 10556 cm, subtract sum of 432 dm and 51.32 m:
 $62.54 \text{ m} + 10556 \text{ cm} = 62.54 \text{ m} + 105.56 \text{ m} = 168.10 \text{ m}$
 $432 \text{ dm} + 51.32 \text{ m} = 43.2 \text{ m} + 51.32 \text{ m} = 94.52 \text{ m}$, $168.10 - 94.52 = 73.58 \text{ m}$

Task-2

- (a) 5 kg = 5000 g (b) 4 kg = 4000 g (c) 1640 mg = 1.64 g
(d) 14 kg = 14000 g (e) 44321 mg = 44.321 g (f) 24 kg = 24000 g
(g) 15 kg = 15,000,000 mg (h) 54050 g = 54.050 kg (i) 2405 mg = 2.405 g

Let's Do 9.2

1. $62000 \text{ g} = 62000 \div 1000 = 62 \text{ kg}$
2. $3 \text{ g} = 3 \times 1000 = 3000 \text{ mg}$
3. Ram = 47 kg; Rahul = 44000 g = 44 kg $\rightarrow$ Ram is heavier by 3 kg
4. 1 dozen = 12 toffees; $12 \times 5 \text{ g} = 60 \text{ g}$
5. Half dozen = 6 boxes; $6 \times 265 \text{ g} = 1590 \text{ g} = 1.590 \text{ kg}$
6. $96.827 - 65.483 = 31.344 \text{ kg}$
7. $82.546 \div 20 = 4.1273 \text{ g}$
8. $3.542 \text{ kg} + 36.801 \text{ kg} + 24.006 \text{ kg} = 64.349 \text{ kg} = 64349 \text{ g}$
9. Express as decagrams (1 dag = 10 g):
(a) $650.365 \text{ kg} = 650365 \text{ g} = 65036.5 \text{ dag}$
(b) $50.342 \text{ kg} = 50342 \text{ g} = 5034.2 \text{ dag}$

Task-3

1. Capacity Conversions

- | | | |
|---------------------------|-----------------------|---------------------------|
| (a) 7 kl = 7000 l | (b) 8 kl = 8000 l | (c) 2300 ml = 2.3 l |
| (d) 13.5 kl = 13500 l | (e) 460000 ml = 460 l | (f) 230 kl = 230000 l |
| (g) 6.5 kl = 6,500,000 ml | (h) 63700 l = 63.7 kl | (i) 5023 ml = 0.005023 kl |

Let's Do 9.3

1. $14.342 + 12.001 + 3.006 = 29.349 \text{ l}$
2. $56005 - 4200 = 51805 \text{ kl}$
3. Express 45 l: dl: 450 dl cl: 4500 cl ml: 45000 ml
4. Express 36024 l: dal: 3602.4 dal hl: 360.24 hl kl: 36.024 kl
5. Water used = $20 + 12 + 16 = 48 \text{ l}$ used out of 60 l
6. Convert 813.813 kl: hl: 8138.13 hl, dal: 81381.3 dal, l: 813813 l

Task-4

- (a) Cotton/light clothes in summer; in winter we wear woollen clothes
- (b) $8^\circ\text{C} \rightarrow$ wear a jacket/sweater
- (c) Water boils at 100°C and freezes at 32°F
- (d) $32^\circ\text{F} = 0^\circ\text{C} \rightarrow$ both are equal
- (e) 32°C is pleasant for picnic $\rightarrow 32^\circ\text{C}$
- (f) $70^\circ\text{F} \approx 21^\circ\text{C}$, suitable for bath $\rightarrow 70^\circ\text{F}$
- (g) $85^\circ\text{F} \approx 29^\circ\text{C}$, warm soup in winter $\rightarrow 85^\circ\text{F}$
- (h) Snowman at 25°F (below freezing) $\rightarrow 25^\circ\text{F}$
- (i) Fahrenheit has greater range

Let's Do 9.4

1. $^\circ\text{C} \rightarrow ^\circ\text{F}$: (a) $20^\circ\text{C} = (20 \times 9/5) + 32 = 36 + 32 = 68^\circ\text{F}$
(b) $75^\circ\text{C} = 135 + 32 = 167^\circ\text{F}$ (c) $40^\circ\text{C} = 72 + 32 = 104^\circ\text{F}$
(d) $60^\circ\text{C} = 108 + 32 = 140^\circ\text{F}$ (e) $30^\circ\text{C} = 54 + 32 = 86^\circ\text{F}$
(f) $25^\circ\text{C} = 45 + 32 = 77^\circ\text{F}$
2. $^\circ\text{F} \rightarrow ^\circ\text{C}$: (a) $68^\circ\text{F} = (68 - 32) \times 5/9 = 36 \times 5/9 = 20^\circ\text{C}$ (b) $158^\circ\text{F} = 126 \times 5/9 = 70^\circ\text{C}$
(c) $77^\circ\text{F} = 45 \times 5/9 = 25^\circ\text{C}$ (d) $149^\circ\text{F} = 117 \times 5/9 = 65^\circ\text{C}$
(e) $167^\circ\text{F} = 135 \times 5/9 = 75^\circ\text{C}$ ss(f) $131^\circ\text{F} = 99 \times 5/9 = 55^\circ\text{C}$

3. Delhi = $50^{\circ}\text{C} = (50 \times 9/5) + 32 = 122^{\circ}\text{F}$; Mumbai = $122 - 25 = 97^{\circ}\text{F}$
 4. Morning = $25^{\circ}\text{C} = 77^{\circ}\text{F}$; Daytime = $77 + 25 = 102^{\circ}\text{F}$

Let's Revise

1. metre (m) 2. gram (g) 3. litre (l) 4. 1 km = 1000 m
 5. 1 mm = 0.1 cm 6. 2 g = 0.002 kg 7. 14 l = 14000 ml

8 (Convert temperatures): (a) $41^{\circ}\text{F} = (41 - 32) \times 5/9 = 5^{\circ}\text{C}$

- (b) $48^{\circ}\text{C} = (48 \times 9/5) + 32 = 118.4^{\circ}\text{F}$
 (c) $32^{\circ}\text{F} = 0^{\circ}\text{C}$
 (d) $7000^{\circ}\text{C} = (7000 \times 9/5) + 32 = 12632^{\circ}\text{F}$
 (e) $45^{\circ}\text{C} = 81 + 32 = 113^{\circ}\text{F}$

9 Tick correct:

- (a) (iii) 212°F (b) (i) 80°C (c) (iii) 113°F

10. JK = KL = 2800 m; JL = 5600 m; LM = $\frac{1}{4} \times 5600 = 1400$ m
 JM = JL + LM = 5600 + 1400 = 7000 m = 7 km

11. 15 bowls $\times$ 150 g = 2250 g = 2.25 kg

12. $\frac{1}{2} + \frac{3}{4} + 0.25 = 0.5 + 0.75 + 0.25 = 1.5$ litresSonnet 4.6



SPEED, DISTANCE AND TIME

Task-1

1. Find the Speed (Speed = Distance $\div$ Time)

- (a) Distance = 60 km, Time = 2 hours, Speed = $60 \div 2 = 30$ km/h
 (b) Distance = 400 km, Time = 16 hours, Speed = $400 \div 16 = 25$ km/h
 (c) Distance = 7200 m, Time = 24 seconds, Speed = $7200 \div 24 = 300$ m/s

2. Express in meters per second (km/h $\times$ 5/18)

- (a) $45 \text{ km/h} = 45 \times 5/18 = 12.5 \text{ m/s}$
 (b) $22 \text{ km/h} = 22 \times 5/18 = 6.11 \text{ m/s}$
 (c) $108 \text{ km/h} = 108 \times 5/18 = 30 \text{ m/s}$

3. Express in km/h

- (a) $45 \text{ m/min} \rightarrow \times 60 \div 1000 = 2.7 \text{ km/h}$
 (b) $25 \text{ m/s} \rightarrow \times 3600 \div 1000 = 90 \text{ km/h}$
 (c) $80 \text{ m/min} \rightarrow \times 60 \div 1000 = 4.8 \text{ km/h}$

4. Express in meters per minute (km/h $\times$ 1000/60)

- (a) $66 \text{ km/h} = 66 \times 1000/60 = 1100 \text{ m/min}$
 (b) $72 \text{ km/h} = 72 \times 1000/60 = 1200 \text{ m/min}$
 (c) $36 \text{ km/h} = 36 \times 1000/60 = 600 \text{ m/min}$

Let's Do 10.1

1. Distance = 360 km, Time = 4 hrs 30 min = 4.5 hrs
 Speed = $360 \div 4.5 = 80 \text{ km/h}$
 2. Raj: 14 km in 15 min $\rightarrow$ speed = $14/15 = 0.933 \text{ km/min}$

Sravan: 24 km in 20 min $\rightarrow$ speed = $24/20 = 1.2$ km/min,
Sravan drove faster.

3. Departure 18:15, Arrival 21:05 $\rightarrow$ Time = 2 hrs 50 min = $2 + 50/60 = 17/6$ hrs
Speed = $150 \div (17/6) = 150 \times 6/17 \approx 52.94$ km/h
4. 600 m in 100s $\rightarrow$ speed in m/s = 6 m/s $\rightarrow$ in km/h = $6 \times 18/5 = 21.6$ km/h

Task-2

1. Find the Distance (Distance = Speed $\times$ Time)

- (a) $480 \text{ km/h} \times 1 \text{ hr} = 480 \text{ km}$
- (b) $20 \text{ m/s} \times 5 \text{ hrs} = 20 \times 18000 \text{ s} = 360,000 \text{ m} = 360 \text{ km}$
- (c) $150 \text{ cm/s} \times 10.5 \text{ s} = 1575 \text{ cm}$

2. Determine the Time (Time = Distance $\div$ Speed)

- (a) $6510 \div 420 = 15.5$ hrs = 15 hrs 30 min
- (b) Distance = 10 m = 1000 cm, Speed = $6\frac{2}{5} \text{ cm/s} = 32/5 \text{ cm/s}$
Time = $1000 \div (32/5) = 1000 \times 5/32 = 156.25$ seconds
- (c) $32 \div 40 = 0.8$ hrs = 48 minutes

3. Chennai Express at 150 km/h

- (a) In meters per minute: $150 \times 1000/60 = 2500 \text{ m/min}$
- (b) In centimeters per second: $150 \times 100000/3600 = 4166.67 \text{ cm/s}$

Let's Do 10.2

1. Time = 6 hrs 30 min = 6.5 hrs, Speed = 675 km/h
Distance = $675 \times 6.5 = 4387.5 \text{ km}$
2. Speed = 12.5 cm/s, Time = 6 hrs = 21600 s
Distance = $12.5 \times 21600 = 270,000 \text{ cm} = 2.7 \text{ km}$
3. Distance = 600 m = 0.6 km, Speed = 60 km/h
Time = $0.6/60 = 0.01$ hrs = 36 seconds
4. Speed = $2\frac{1}{2} \text{ km/h} = 2.5 \text{ km/h}$, Time = 30 min = 0.5 hrs
Distance = $2.5 \times 0.5 = 1.25 \text{ km}$
5. Speed = 5 m/s, Distance = 1 km = 1000 m
Time = $1000 \div 5 = 200$ seconds
6. Leaves 7 PM, arrives next day 4 PM $\rightarrow$ total = 21 hrs, stops 1 hr $\rightarrow$ travel
time = 20 hrs, Speed = $725 \div 20 = 36.25 \text{ km/h}$
7. Speed = 25 km/h, Time = 30 min = 0.5 hrs
Distance = $25 \times 0.5 = 12.5 \text{ km}$

Let's Revise

1. (a) 50 km/h in m/min = $50 \times 1000/60 = 833.33 \text{ m/min}$
(b) 45 km/h in m/s = $45 \times 5/18 = 12.5 \text{ m/s}$

2. Complete the Table:

Speed	Distance	Time
(a) 30 km/h	150 km	5 hrs
(b) 140 km/h	210 km	$1\frac{1}{2}$ hrs
(c) 30 km/h	630 km	21 hrs
(d) 42 km/h	252 km	6 hrs
(e) 45 km/h	360 km	8 hrs

Task-1

1. Which of the following statements are true?

- (d) A line segment has two end points. ✓
- (e) A ray has only one end point. ✓

2. Count line segments

- (a) Triangle with internal lines (A, B, C, D, E):
Line segments: AB, BC, CA, AE, BE, CE, DE = 7 line segments
Named: AB, BC, CA, AE, BE, CE, DE
- (b) Star of David figure (A, B, C, D, E, F): Line segments: 12 line segments
Named: AB, BC, CD, DE, EF, FA and 6 internal segments forming the inner hexagon.

3. Draw figures (descriptions)

- (a) PQ – Line segment with two endpoints P and Q (a fixed length with a bar on top)
- (b) MN – A line passing through M and N (arrows on both sides, extends infinitely in both directions)
- (c) CD – A ray starting at C going through D (one endpoint at C, arrow at D side)

Task-2

1. Through a single point, you can draw infinitely many lines.
2. Through two fixed points, only one line can be drawn.
4. **PQ = 1.5 cm, RS = 5.6 cm:**

Part	Calculation	Length
(a) PQ + RS	$1.5 + 5.6$	7.1 cm
(b) RS – PQ	$5.6 - 1.5$	4.1 cm
(c) 2PQ	2×1.5	3.0 cm
(d) 5PQ – RS	$7.5 - 5.6$	1.9 cm
(e) 2RS – 3PQ	$11.2 - 4.5$	6.7 cm

Let's Do 11.1

1. Joining 3 non-collinear points two at a time gives 3 line segments → forming a triangle.
2. PQ = 1.5 cm, RS = 6.2 cm → AB = PQ + RS = 7.7 cm
3. CD = 2.4 cm → AB = 2 × CD = 4.8 cm
4. **Fill in the blanks:**
 - (a) A line segment has two end points.
 - (b) A ray has one starting point.
 - (c) A line has no end points.
 - (d) A line segment has definite length.
 - (e) A line can be extended in both directions.
 - (f) A ray can be extended only in one direction.
 - (g) A line cannot be drawn wholly on a surface but only a portion of it.

Task-3

1. Type of angles shown on clocks:

- (a) Acute (less than 90°) (b) Right (exactly 90°)
(c) Acute (less than 90°) (d) Obtuse (between 90° – 180°)
(e) Zero angle (both hands together / straight up)

2. Classify the angles:

Acute	Obtuse	Right	Straight	Zero	Reflex
$45^\circ, 25^\circ, 69^\circ, 80^\circ$	$160^\circ, 120^\circ$	90°	180°	0°	240°

Let's Do 11.2

1. Measure these angles using a protractor:

- (a) 120° (obtuse) (b) 25° (acute) (c) 40° (acute)
(d) 30° (acute) (e) 90° (right angle) (f) 180° (straight angle)
(g) 180° (straight angle)

Task-4

1. Classify line segments (Circle with center O):

- (a) OP Radius (b) OQ Radius (c) OR Radius
(d) AB Diameter (e) CD Chord (f) LM Chord

2. From the figure (center O, points P, Q, R, S, T, U):

- (a) Center: O (b) All radii: OP, OQ, OR, OS, OT, OU
(c) All diameters: PQ, RS (lines passing through O)
(d) All chords: PQ, RS, TU, and any segment joining two boundary points.

4. Fill in the blanks:

- (a) A diameter is a chord that **passes** through the center.
(b) A radius has one end point **at the center** and the other end **on the circle**.
(c) Joining any two points on a circle gives a **chord**.
(d) Any part of a circle is called an **arc**.
(e) Half a circle is called a **semicircle**.
(f) Diameter = 8.4 cm $\rightarrow$ Radius = **4.2 cm**
(g) Radius = 3.6 cm $\rightarrow$ Diameter = **7.2 cm**
(h) Distance from center to a point on circle is called the **radius**.
(i) We name an **arc** by three points.
(j) The distance around the circle is known as its **circumference**.

Let's Do 11.3

3. Diameter = 8 cm $\rightarrow$ Radius = 4 cm

4. Three concentric circles with radii 2 cm, 4 cm, and 5 cm (same center)

5. Radius = 6 cm $\rightarrow$ Longest chord = Diameter = 12 cm

6. True or False:

- | | |
|---|--------------|
| (a) Each diameter is also a chord. | True |
| (b) Each radius is also a chord. | False |
| (c) Center bisects each diameter. | True |
| (d) Chord has endpoints on the circle. | True |
| (e) All radii are not equal. | False |
| (f) Point farther than radius lies in interior. | False |

Let's Revise

3. Radius = 5 cm $\rightarrow$ Diameter = 10 cm

4. **True or False:**

- | | |
|---|--------------|
| (a) Angle $> 90^\circ$ and $< 180^\circ$ is obtuse. | True |
| (b) Angle $< 180^\circ$ is acute. | False |
| (c) Two angles summing to 90° are congruent. | False |

5. **Line vs Line Segment** : A line extends infinitely in both directions with no endpoints. A line segment has two fixed endpoints and a definite length.

6. **Ray vs Line Segment** : A ray has one endpoint and extends infinitely in one direction. A line segment has two endpoints and a fixed, measurable length.



TRIANGLES AND QUADILATERALS

Task-1:

1. **Classify triangles by their sides**

- (a) Triangle NLM: sides 5 cm, 4 cm, 3 cm — all different $\rightarrow$ Scalene Triangle
(b) Triangle ABC: sides 5 cm, 5 cm, 5 cm — all equal $\rightarrow$ Equilateral Triangle
(c) Triangle WXY: sides 7 cm, 4 cm, 5 cm — all different $\rightarrow$ Scalene Triangle

Task-2

1. **Classify by angles**

- | | | |
|-------------------------------------|---|------------------------|
| (a) $60^\circ, 60^\circ, 60^\circ$ | : | Acute Angled Triangle |
| (b) $45^\circ, 45^\circ, 90^\circ$ | : | Right Angled Triangle |
| (c) $50^\circ, 40^\circ, 90^\circ$ | : | Right Angled Triangle |
| (d) $120^\circ, 20^\circ, 40^\circ$ | : | Obtuse Angled Triangle |
| (e) $60^\circ, 80^\circ, 40^\circ$ | : | Acute Angled Triangle |
| (f) $88^\circ, 42^\circ, 50^\circ$ | : | Acute Angled Triangle |

2: **Who am I?**

- | | | |
|--|---------------|------------------------|
| (a) Two equal sides | $\rightarrow$ | Isosceles Triangle |
| (b) One 90° angle | $\rightarrow$ | Right Angled Triangle |
| (c) All angles equal | $\rightarrow$ | Equilateral Triangle |
| (d) No equal angles | $\rightarrow$ | Scalene Triangle |
| (e) One angle between 90° and 180° | $\rightarrow$ | Obtuse Angled Triangle |

Task-3

1: **Find unknown angle**

- | | |
|--|---|
| (a) $a + 70^\circ + 35^\circ = 180^\circ \rightarrow a = 75^\circ$ | (b) $a + 120^\circ + 24^\circ = 180^\circ \rightarrow a = 36^\circ$ |
| (c) $a + 40^\circ + 90^\circ = 180^\circ \rightarrow a = 50^\circ$ | (d) $a + 90^\circ + 45^\circ = 180^\circ \rightarrow a = 45^\circ$ |
| (e) $a + 93^\circ + 54^\circ = 180^\circ \rightarrow a = 33^\circ$ | (f) $a + 130^\circ + 17^\circ = 180^\circ \rightarrow a = 33^\circ$ |

Task-3

2. Isosceles triangles — find value of a

- (a) $PQ = PR$ (equal sides), so base angles are equal. $R = 75^\circ$, $Q = a^\circ$ Since $PQ = PR \rightarrow Q = R = 75^\circ \dots$ but wait, the tick marks show $PQ = PR$, so $Q = R$.
 $Q = a$, $R = 75^\circ \rightarrow a = 75^\circ$, and $P = 180^\circ - 75^\circ - 75^\circ = 30^\circ$
- (b) $QP = QR$ (tick marks on QP and QR... actually ticks on QR and QP base)
 $Q = 40^\circ$, $P = a$ (equal sides $QP = RP$, so base angles $Q = R \dots$ ticks on QR and RP) Equal sides: $QR = RP \rightarrow$ base angles $Q = P \rightarrow a = 40^\circ$
Check: $40^\circ + 40^\circ + P(\text{top}) = 180^\circ \rightarrow a = 40^\circ$, $P = 100^\circ$
- (c) $PQ = QR$ (tick marks), so $P = R = a^\circ$ $Q = 75^\circ$, so $75^\circ + a + a = 180^\circ \rightarrow 2a = 105^\circ \rightarrow a = 52.5^\circ$

Let's Do 12.1

1. Joining P, Q, R gives a Triangle.

- (a) Side opposite to P $\rightarrow QR$ (b) Angle opposite to side PR $\rightarrow Q$
(c) Angle opposite to side QR $\rightarrow P$ (d) Side opposite to R $\rightarrow PQ$

2. Possible triangle?

- (a) $110^\circ + 50^\circ + 40^\circ = 200^\circ \neq 180^\circ$ No
(b) $80^\circ + 80^\circ + 80^\circ = 240^\circ \neq 180^\circ$ No
(c) $90^\circ + 40^\circ + 50^\circ = 180^\circ$ Yes
(d) $7+3=10 > 4$, but $3+4=7$, not > 7 No
(e) $100^\circ + 35^\circ + 35^\circ = 170^\circ \neq 180^\circ$ No
(f) $10+12 > 8$, $10+8 > 12$, $12+8 > 10$ Yes

3. In LMN (angle sum = 180°):

- (a) $L=50^\circ$, $M=40^\circ$, $N = 180^\circ - 90^\circ = 90^\circ \rightarrow$ Right angled triangle
(b) $M=90^\circ$, $N=45^\circ$, $L = 180^\circ - 135^\circ = 45^\circ \rightarrow$ Right angled isosceles triangle
(c) $M=45^\circ$, $N=25^\circ$, $L = 180^\circ - 70^\circ = 110^\circ \rightarrow$ Obtuse angled triangle
(d) $N=110^\circ$, $L=30^\circ$, $M = 180^\circ - 140^\circ = 40^\circ \rightarrow$ Obtuse angled triangle

4. Ratio 4:6:2, total parts = 12, sum = 180° Each part = $15^\circ \rightarrow$ Angles: 60° , 90° , 30°

5. Isosceles triangle, one equal angle = 45° , so other equal angle = 45°

Third angle = $180^\circ - 45^\circ - 45^\circ = 90^\circ$ Angles are: 45° , 45° , 90°

6. Right triangle: one acute angle = 50° Other acute angle = $180^\circ - 90^\circ - 50^\circ = 40^\circ$

7. True or False:

- (a) False (b) True (c) False (d) True (e) False

Task-4

1: Properties Table

Property	Parallelogram	Rhombus	Rectangle	Square
(a) All sides congruent	No	Yes	No	Yes
(b) Opposite sides congruent	Yes	Yes	Yes	Yes
(c) Opposite sides parallel	Yes	Yes	Yes	Yes
(d) All angles right angles	No	No	Yes	Yes

2. A parallelogram has both pairs of opposite sides parallel, while a trapezium has only one pair of opposite sides parallel.
3. A square has all angles equal to 90° (right angles), while a rhombus does not necessarily have right angles — only its sides are all equal.

Let's Do 12.2

1. Sum of angles in quadrilateral = 360°

- (a) $120^\circ + 70^\circ + 60^\circ + X = 360^\circ \rightarrow X = 110^\circ$
- (b) $85^\circ + 100^\circ + 120^\circ + Y = 360^\circ \rightarrow Y = 55^\circ$
- (c) $90^\circ + 100^\circ + 90^\circ + Z = 360^\circ \rightarrow Z = 80^\circ$

2. Parallel sides:

- (a) Trapezium LMNO: LO MN
- (b) Parallelogram PQRS: PQ SR and PS QR (i.e., PS QR, PQ SR)
- (c) Rectangle ABCD: AD BC and AB DC
- (d) Parallelogram ABCD: AD BC and AB DC

3. PQRS is a parallelogram (with diagonals shown):

- (a) $Q = S$ (opposite angles are equal)
- (b) $QP = SR$ (opposite sides are equal)
- (c) $QR = PS$ (opposite sides are equal)
- (d) $P = R$ (opposite angles are equal)
- (e) Two diagonals = PR and QS

4. Square with side 4.5 cm : Perimeter = $4 \times 4.5 = 18$ cm

$$\text{Area} = 4.5 \times 4.5 = 20.25 \text{ cm}^2$$

7. Quadrilateral with angles 60° , 60° , 110° : Unknown angle = $360^\circ - 60^\circ - 60^\circ - 110^\circ = 130^\circ$

Let's Revise

1. non-collinear
2. 3 vertices and 3 line segments
3. greater
4. sides and angles
5. vertex
6. right angled triangle
7. set squares
8. non-collinear points
9. non-collinear
10. 180°
11. 4 angles, 2 diagonals, 4 sides and 4 vertices



MENSURATION

Task-1

1. Finding the Perimeter of Triangles

	Sides	Perimeter
(a)	$3 + 3 + 4$	$= 10 \text{ cm}$
(b)	$3 + 5 + 4$	$= 12 \text{ cm}$
(c)	$7 + 11 + 10$	$= 28 \text{ cm}$
(d)	$4 + 7 + 8$	$= 19 \text{ cm}$

Task-2

Area / Perimeter Worksheet :

- (a) Area = length $\times$ breadth $\rightarrow 16 = 2 \times ? \rightarrow$ Missing length = 8 units
(b) Area = length $\times$ breadth $\rightarrow 12 = 4 \times ? \rightarrow$ Missing breadth = 3 units
(c) Perimeter of rectangle (10 cm $\times$ 5 cm) = $2 \times (10 + 5) = 30$ cm
(d) Perimeter = 20, length = 8 cm $\rightarrow 20 = 2(8 + ?) \rightarrow 10 = 8 + ? \rightarrow$ Missing breadth = 2 cm
(e) Area of square (side 8 cm) = $8 \times 8 = 64$ sq cm
(f) Area of square (side 4 cm) = $4 \times 4 = 16$ sq cm

Let's Do 13.1

1. **Area of hall** = $18 \times 13 = 234$ sq m $\rightarrow$ Cost = $234 \times ₹7 = ₹1,638$
2. **Platform area** = $1200 \text{ cm} \times 800 \text{ cm} = 9,60,000$ sq cm; Slab area = $6 \times 4 = 24$ sq cm $\rightarrow$ Slabs = $9,60,000 \div 24 = 40,000$ slabs
3. **Area of board** = $45 \times 45 = 2025$ sq cm $\rightarrow$ Cost = $2025 \times ₹7 = ₹14,175$
4. **Area of game board** = $8 \times 8 = 64$ sq cm; Each square = 1 sq cm $\rightarrow 64$ squares.
5. **Wall** = $224 \text{ cm} \times 50 \text{ cm} = 11,200$ sq cm; Brick = $10 \times 8 = 80$ sq cm $\rightarrow$ Bricks = $11,200 \div 80 = 140$ bricks

Task-3

Volume of Cubes (Volume = side³)

Side	Volume
(a) 13 cm	$13^3 = 2197$ cu cm
(b) 14 mm	$14^3 = 2744$ cu mm
(c) 16 m	$16^3 = 4096$ cu m
(d) 22 cm	$22^3 = 10,648$ cu cm
(e) 15 cm	$15^3 = 3375$ cu cm
(f) 25 m	$25^3 = 15,625$ cu m

2. Volume of Cuboids (V = l $\times$ b $\times$ h)

L	B	H	Volume
(a) 13cm	10cm	3 cm	390 cu cm
(b) 8 cm	6 cm	3.5 cm	168 cu cm
(c) 6.2 cm	8.3 cm	6 cm	308.76 cu cm
(d) 77 mm	62 mm	59.5 mm	2,84,053 cu mm
(e) 400 cm	200 cm	160 cm	1,28,00,000 cu cm
(f) 230 mm	45 mm	7030 mm	7,27,60,350 cu mm
(g) 14600 cm	8500 cm	63 cm	78,19,80,000 cu cm
(h) 9500 cm	95 cm	1500 cm	13,53,75,00,000 cu cm

Let's Do 13.2

- $16 \text{ cm} \times 11 \text{ cm} \times 15 \text{ cm} = 2,640 \text{ cu cm}$
- Wall = $3500 \text{ cm} \times 300 \text{ cm} \times 35 \text{ cm} = 3,67,50,000 \text{ cu cm}$; Brick = $20 \times 10 \times 3.5 = 700 \text{ cu cm} \rightarrow 52,500 \text{ bricks}$
- Volume = $16 \times 8 \times 12 = 1,536 \text{ cu cm}$
- Cuboid = $1200 \times 500 \times 30 = 1,80,00,000 \text{ cu cm}$; Cube = $5^3 = 125 \text{ cu cm} \rightarrow 1,44,000 \text{ pieces}$
- $8 \text{ cm} = 0.08 \text{ m} \rightarrow \text{Volume} = 0.08^3 = 0.000512 \text{ cu m}$

6. Complete the table:

Solid	L	B	H	Volume
(a) Cube	5 cm	5 cm	5 cm	125 cu cm
(b) Cuboid	16 cm	10 cm	3 cm	480 cu cm
(c) Cuboid	25 m	15 m	18 m	6,750 cu m
(d) Cube	12 cm	12 cm	12 cm	1728 cu cm

Let's Revise

- Perimeter = $2(4+2) = 12 \text{ cm}$
- Perimeter = $4 \times 4 = 16 \text{ cm}$
- Perimeter = $4+5+6 = 15 \text{ cm}$
- A square has all 4 sides equal
- A rectangle has 4 sides and 4 right angles
- The length of a rectangle is always greater than the breadth
- Area = $n^2 \text{ sq cm}$
- Area = $l \times b \text{ sq cm}$
- Area = $13 \times 13 = 169 \text{ sq cm}$
- $8 \times 8 = 64 \text{ unit squares}$
- (a) $20 \text{ m} = 2000 \text{ cm} \rightarrow \text{Area} = 2000^2 = 40,00,000 \text{ sq cm} \rightarrow \text{Cost} = 40,00,000 \times ₹5 = ₹2,00,00,000$;
(b) Area = $400 \times 500 = 2,00,000 \text{ sq cm} \rightarrow \text{Cost} = ₹10,00,000 \rightarrow \text{Square wall (a) is more costly}$



MODEL TEST PAPER - 1

1. Number Names (Indian Number System)

(a) **4,30,28,314** : Four crore thirty lakh twenty-eight thousand three hundred fourteen

(b) **70,00,20,305** : Seventy crore twenty thousand three hundred five

2. Expanded Form

(a) **34,28,63,148** = $3 \times 10,00,00,000 + 4 \times 1,00,00,000 + 2 \times 10,00,000 + 8 \times 1,00,000 + 6 \times 10,000 + 3 \times 1,000 + 1 \times 100 + 4 \times 10 + 8 \times 1$

(b) **19,28,85,393** = $1 \times 10,00,00,000 + 9 \times 1,00,00,000 + 2 \times 10,00,000 + 8 \times 1,00,000 + 8 \times 10,000 + 5 \times 1,000 + 3 \times 100 + 9 \times 10 + 3 \times 1$

3. Greatest 3-digit number in Roman Numerals : 999 = CMXCIX

4. To make 9 crores Sum of 65,16,532 + 6,96,85,082 = 7,62,01,614

Number to add = $9,00,00,000 - 7,62,01,614 = 1,37,98,386$

5. Total price of 900 chairs @ ₹6,540 each $900 \times 6,540 = ₹58,86,000$

6. BODMAS

(a) $60 + [30 + \{12 - (6 \div 3)\}] = 60 + [30 + \{12 - 2\}] = 60 + [30 + 10] = 60 + 40 = 100$

(b) $14 \times [63 + \{20 - (10 + 3)\}] = 14 \times [63 + \{20 - 13\}] = 14 \times [63 + 7] = 14 \times 70 = 980$

7. Divisibility by 15 (divisible by both 3 and 5)

(a) 10275 $\rightarrow$ ends in 5, YES digit sum = 15 $\rightarrow$ YES Divisible

(b) 85475 $\rightarrow$ ends in 5, YES digit sum = 29 $\rightarrow$ Not divisible

(c) 89760 $\rightarrow$ ends in 0, YES digit sum = 30 $\rightarrow$ YES Divisible

8. HCF and LCM

(a) **693 and 1078** HCF = 7 LCM = $693 \times 1078 \div 7 = 1,06,722$

(b) **861 and 1353** HCF = 123 LCM = $861 \times 1353 \div 123 = 9,471$

9. Simplify

(a) $3\frac{1}{2} \times 4\frac{3}{5} \times 1 = \frac{7}{2} \times \frac{23}{5} \times 1 = \frac{161}{10} = 16\frac{1}{10}$

(b) $12\frac{3}{19} \times 3 \times 8\frac{5}{6} = \frac{231}{19} \times 3 \times \frac{53}{6} = \frac{(231 \times 3 \times 53)}{(19 \times 6)} = \frac{36,729}{114} = 322\frac{1}{3}$

(c) $3\frac{1}{2} \div [\{1/4 - (1/6 - 1/12)\}] + 1/15$

First, innermost: $1/6 - 1/12 = 2/12 - 1/12 = 1/12$

Then: $1/4 - 1/12 = 3/12 - 1/12 = 2/12 = 1/6$

Then: $7/2 \div 1/6 = 7/2 \times 6 = 21$

Finally: $21 + 1/15 = 316/15 = 21\frac{1}{15}$

10. Convert to Fractions

(a) $345.25 = 345 \frac{25}{100} = \frac{13810}{40} = 1381\frac{1}{4}$

(b) $2614.3 = 2614 \frac{3}{10} = 26,143\frac{3}{10}$

11. Bus fare for a day : Monthly = 30 days

$\text{₹}129.90 \div 30 = \text{₹}4.33 \text{ per day}$

12. Percentage increase in table cost : Increase = ₹9,500 – ₹6,500 = ₹3,000

$\% \text{ increase} = (3,000/6,500) \times 100 = 46.15\%$



MODEL TEST PAPER - 2

1. C.P. of the car S.P. = ₹1,80,000 | Loss = ₹65,000

$\text{C.P.} = \text{S.P.} + \text{Loss} = 1,80,000 + 65,000 = \text{₹}2,45,000$

2. Total distance by Ramya 3 km + 2,000 m = 3 km + 2 km = 5 km

3. Temperature in °F Morning: $25^{\circ}\text{C} \rightarrow \text{in } ^{\circ}\text{F} = (25 \times 9/5) + 32 = 45 + 32 = 77^{\circ}\text{F}$

Daytime increase of $25^{\circ}\text{F} \rightarrow 77 + 25 = 102^{\circ}\text{F}$

4. Speed of the train Departure: 18:15 | Arrival: 21:05

$\text{Time} = 2 \text{ hrs } 50 \text{ min} = 2 \frac{5}{6} \text{ hrs} = \frac{17}{6} \text{ hrs}$

$\text{Speed} = 150 \div \frac{17}{6} = 150 \times \frac{6}{17} \approx 52.94 \text{ km}$

5. Distance covered by cyclist in 30 minutes : Speed = 25 km/h, Time = 0.5 h

$\text{Distance} = 25 \times 0.5 = 12.5 \text{ km}$

6. Line Segment AB PQ = 1.5 cm, RS = 6.2 cm AB = PQ + RS = 7.7 cm

7. Types of Angles : (a) Acute angle (b) Right angle

(c) Acute angle (d) Obtuse angle (e) Zero / 360° (straight up)

8. Other acute angle in right-angled triangle : Sum of angles = 180°

$\text{Right angle} = 90^{\circ}$, one acute = 50° Other acute angle = $180^{\circ} - 90^{\circ} - 50^{\circ} = 40^{\circ}$

9. Parallelogram ABCD Sides: AB = CD = 5 cm, BC = AD = 7 cm, A = 75°

(Draw using ruler and protractor)

10. Number of bricks required : Wall volume = $35 \text{ m} \times 3 \text{ m} \times 0.35 \text{ m} = 36.75 \text{ m}^3 =$

$3,67,50,000 \text{ cm}^3$

$\text{Brick volume} = 20 \times 10 \times 3.5 = 700 \text{ cm}^3$

$\text{Number of bricks} = 3,67,50,000 \div 700 = 52,500 \text{ bricks}$

11. (a) 8 L (b) Laxmi (c) Hani