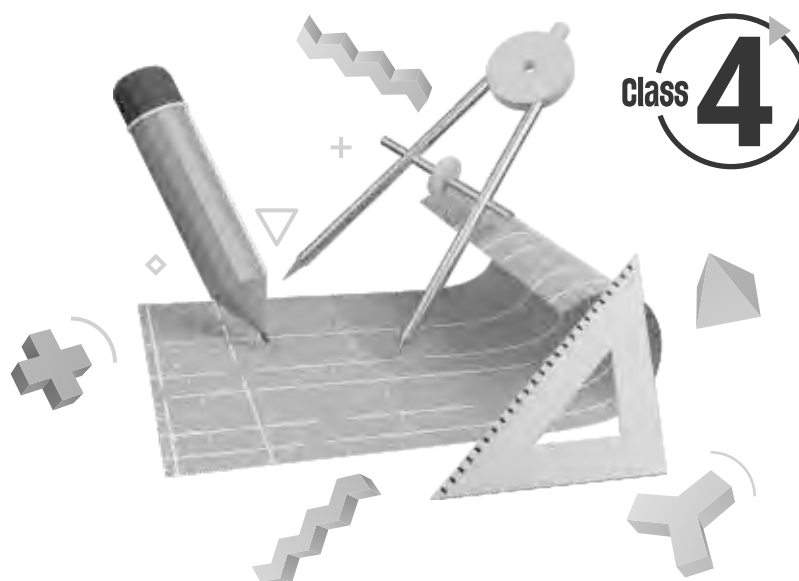




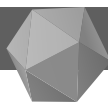
# FOCUS Maths

A Complete Course in Mathematics

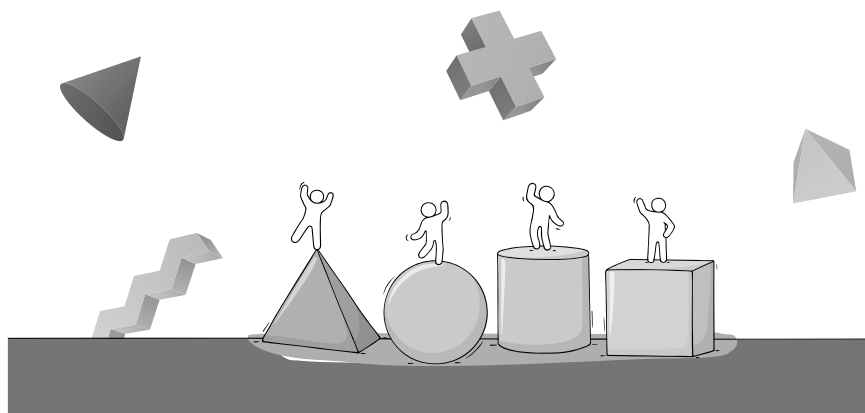
**Solution Manual**



## Contents



|                             |         |
|-----------------------------|---------|
| 1. Looking Back             | 3-10    |
| 2. Numbers                  | 10-17   |
| 3. Addition and Subtraction | 17-34   |
| 4. Multiplication           | 34-44   |
| 5. Division                 | 44-52   |
| 6. Multiples and Factors    | 53-60   |
| 7. Fractions                | 60-73   |
| 8. Decimals                 | 73-79   |
| 9. Patterns and Symmetry    | 79-81   |
| 10. Time                    | 82-91   |
| 11. Measurement             | 91-102  |
| 12. Geometry                | 103-104 |
| 13. Perimeter and Area      | 105-111 |
| 14. Data Handling           | 111-113 |





# Looking Back



## Exercise 1A

### 1. Write the number names for each given numbers :

- (a) 989  $\Rightarrow$
- (b) 1379  $\Rightarrow$
- (c) 5076  $\Rightarrow$
- (d) 8705  $\Rightarrow$

### 2. Write the numerals for each given number names :

- (a) Three thousand seven hundred eight.
- (b) Four thousand four.
- (c) Six thousand seven hundred ninety nine.
- (d) Eight-thousand fifty two.

### 3. Write the consecutive numbers that comes after :

- (a) 997    998    999    1000    1001    1002
- (b) 3548    3549    3550    3551    3552    3553
- (c) 7007    7008    7009    7010    7011    7012
- (d) 8998    8999    9000    9001    9002    9003

### 4. Write in the expanded form :

- (a) 2345 =     (b) 3042 =
- (c) 9307 =     (d) 8006 =

### 5. Use the sign $>$ , $<$ or $=$ :

- (a) 7829  8792    (b) 3074  3074
- (c) 4260  4206    (d) 7008  8007

### 6. Write smallest 4-digit number using each digit only once :

- (a) 3, 0, 2, 8        (b) 5, 7, 1, 9

(c) 1, 2, 0, 9  (d) 4, 6, 2, 5

7. Write greatest 4-digit number using each digit only once:

(a) 0, 3, 7, 1  (b) 5, 4, 9, 2

(c) 9, 6, 3, 2  (d) 4, 6, 8, 0

8. Write in the ascending order:

(a) 3204, 4598, 5498, 2304

(b) 603, 1901, 9001, 9101

9. Write in the descending order:

(a) 8976, 8967, 9867, 9876

(b) 6145, 4651, 5641, 6541

10. Write the predecessor of the given numbers:

(a) 889 890 (b) 3649 3650

(c) 7988 7989 (d) 1999 2000

11. Write the successor of the given numbers:

(a) 3999 4000 (b) 4089 4090

(c) 5555 5556 (d) 6709 6710

12. Fill in the blanks:

(a) In 948 The place value of 9 is 900 that of 4 is 40 that of 8 is 8.

(b) In 8907 The place value of 8 is 8000 that of 9 is 900 that of 7 is 7.

(c) In 2385 The place value of 5 is 5 that of 3 is 300 that of 2 is 2000.

(d) In 5764 The place value of 7 is 700 that of 6 is 60 that of 5 is 5000.

13. Write in Roman numerals:

(a) 8 VIII (b) 14 XIV (c) 9 IX (d) 17 XVII

14. Write in the form of Hindi-Arabic numerals:

(a) XI 11 (b) VII 7 (c) XIX 19 (d) XXIV 24

15. Observe the pattern and fill in the blanks:

(a) 3245, 3345, 3445, 3545, 3645, 3745, 3845

(b) 2333, 3333, 4333, 5333, 6333, 7333, 8333

(c) 7225, 7275, 7325, 7375, 7425, 7475, 7525

(d) 1100, 2200, 3300, 4400, 5500, 6600, 7700



Do these sum :

16 (a) 
$$\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \\ 3 \ 7 \ 8 \ 5 \\ + 4 \ 3 \ 2 \ 6 \\ \hline 8 \ 1 \ 1 \ 1 \end{array}$$
 (b) 
$$\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \\ 4 \ 5 \ 0 \ 8 \\ + 1 \ 7 \ 9 \ 3 \\ \hline 6 \ 3 \ 0 \ 1 \end{array}$$
 (c) 
$$\begin{array}{r} \textcircled{2} \textcircled{17} \textcircled{13} \textcircled{12} \\ \cancel{3} \ \cancel{8} \ \cancel{4} \ \cancel{2} \\ - 2 \ 9 \ 5 \ 4 \\ \hline 0 \ 8 \ 8 \ 8 \end{array}$$
 (d) 
$$\begin{array}{r} \textcircled{9} \\ \textcircled{6} \textcircled{17} \textcircled{10} \textcircled{11} \\ \cancel{7} \ \cancel{8} \ \cancel{0} \ \cancel{1} \\ - 5 \ 9 \ 3 \ 2 \\ \hline 1 \ 8 \ 6 \ 9 \end{array}$$

17. (a) 
$$\begin{array}{r} 4 \ 3 \\ \times 3 \ 0 \\ \hline 0 \ 0 \\ + 1 \ 2 \ 9 \ 0 \\ \hline 1 \ 2 \ 9 \ 0 \end{array}$$
 (b) 
$$\begin{array}{r} 3 \ 7 \\ \times 4 \ 0 \\ \hline 0 \ 0 \\ + 1 \ 4 \ 8 \ 0 \\ \hline 1 \ 4 \ 8 \ 0 \end{array}$$
 (c) 
$$\begin{array}{r} 1 \ 5 \ 6 \\ \times 5 \ 0 \\ \hline 0 \ 0 \\ + 7 \ 8 \ 0 \ 0 \\ \hline 7 \ 8 \ 0 \ 0 \end{array}$$
 (d) 
$$\begin{array}{r} 4 \ 0 \ 8 \\ \times 6 \ 0 \\ \hline 0 \ 0 \ 0 \\ + 2 \ 4 \ 4 \ 8 \ 0 \\ \hline 2 \ 4 \ 4 \ 8 \ 0 \end{array}$$
 (e) 
$$\begin{array}{r} 2 \ 4 \\ \times 2 \ 0 \ 0 \\ \hline 0 \ 0 \\ + 4 \ 8 \ 0 \ 0 \\ \hline 4 \ 8 \ 0 \ 0 \end{array}$$

18. (a) 
$$\begin{array}{r} 4 \ 5 \\ \times 2 \ 3 \\ \hline 1 \ 3 \ 5 \\ + 9 \ 0 \ 0 \\ \hline 1 \ 0 \ 3 \ 5 \end{array}$$
 (b) 
$$\begin{array}{r} 8 \ 5 \\ \times 7 \ 3 \\ \hline 2 \ 5 \ 5 \\ + 5 \ 9 \ 5 \ 0 \\ \hline 6 \ 2 \ 0 \ 5 \end{array}$$
 (c) 
$$\begin{array}{r} 3 \ 5 \ 9 \\ \times 4 \ 7 \\ \hline 2 \ 5 \ 1 \ 3 \\ + 1 \ 4 \ 3 \ 6 \ 0 \\ \hline 1 \ 6 \ 8 \ 7 \ 3 \end{array}$$
 (d) 
$$\begin{array}{r} 2 \ 0 \ 9 \\ \times 5 \ 6 \\ \hline 1 \ 2 \ 5 \ 4 \\ + 1 \ 0 \ 4 \ 5 \ 0 \\ \hline 1 \ 1 \ 7 \ 0 \ 4 \end{array}$$
 (e) 
$$\begin{array}{r} 7 \ 2 \ 3 \\ \times 6 \ 5 \\ \hline 3 \ 6 \ 1 \ 5 \\ + 4 \ 3 \ 3 \ 8 \ 0 \\ \hline 4 \ 6 \ 9 \ 9 \ 5 \end{array}$$

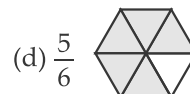
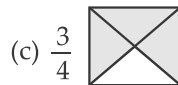
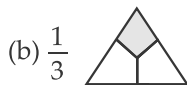
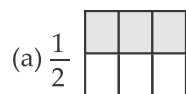
19. (a) 
$$\begin{array}{r} 2 \ 4 \\ 2 \overline{) 4 \ 8} \\ \underline{- 4} \phantom{0} \\ 0 \ 8 \\ \underline{- 8} \\ 0 \end{array}$$
 (b) 
$$\begin{array}{r} 1 \ 9 \\ 3 \overline{) 5 \ 8} \\ \underline{- 3} \phantom{0} \\ 2 \ 8 \\ \underline{- 2 \ 7} \\ 1 \end{array}$$
 (c) 
$$\begin{array}{r} 9 \\ 6 \overline{) 5 \ 9} \\ \underline{- 5 \ 4} \\ 5 \end{array}$$
  
 Dividend =  $2 \times 24 + 0 = 48$       Dividend =  $3 \times 19 + 1 = 58$       Dividend =  $6 \times 9 + 5 = 59$

20. (a) 
$$\begin{array}{r} 1 \ 8 \ 4 \\ 2 \overline{) 3 \ 6 \ 8} \\ \underline{- 2} \phantom{0} \\ 1 \ 6 \\ \underline{- 1 \ 6} \\ 0 \ 8 \\ \underline{- 8} \\ 0 \end{array}$$
 (b) 
$$\begin{array}{r} 4 \ 7 \ 5 \\ 5 \overline{) 2 \ 3 \ 7 \ 5} \\ \underline{- 2 \ 0} \phantom{0} \\ 0 \ 3 \ 7 \\ \underline{- 3 \ 5} \phantom{0} \\ 0 \ 2 \ 5 \\ \underline{- 2 \ 5} \\ 0 \end{array}$$
 (c) 
$$\begin{array}{r} 4 \ 2 \ 1 \\ 9 \overline{) 3 \ 7 \ 8 \ 9} \\ \underline{- 3 \ 6} \phantom{0} \\ 0 \ 1 \ 8 \\ \underline{- 1 \ 8} \phantom{0} \\ 0 \ 9 \\ \underline{- 9} \\ 0 \end{array}$$
 (d) 
$$\begin{array}{r} 4 \ 1 \ 2 \\ 7 \overline{) 2 \ 8 \ 8 \ 4} \\ \underline{- 2 \ 8} \phantom{0} \\ 0 \ 8 \\ \underline{- 7} \phantom{0} \\ 1 \ 4 \\ \underline{- 1 \ 4} \\ 0 \end{array}$$
  
 Q = 184      Q = 475      Q = 421      Q = 412



## Exercise 1B

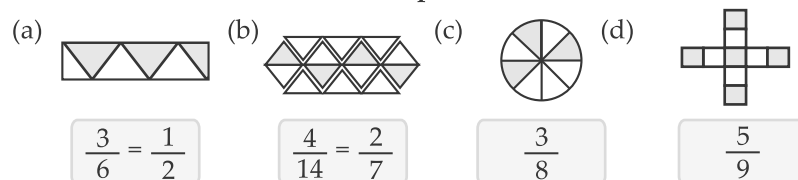
1. Colour to show the fraction :



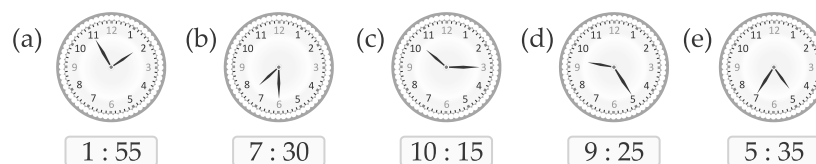
2. Write 'T' for true and 'F' for false :

- (a) A cube has 6 faces and 8 vertices. (True)  
 (b) A cuboid has 8 vertices and 12 faces. (True)  
 (c) A circle has only one side. (False)  
 (d) Adjacent sides of a square are equal. (True)  
 (e) All sides of a rectangle are equal. (False)  
 (f) A cylinder has 2 flat faces and one curved face. (True)

3. Write the fraction for the coloured part :



4. Write the time :



5. Fill in the blanks :

- (a) 40 paise = Re \_\_\_\_  
 $\because 100 \text{ paise} = 1 \text{ rupee}$   
 $\therefore 40 \text{ paise} = (40 \div 100) \text{ rupee}$   
 $= ₹ 0.40$
- (b) Rs. 15.15 = \_\_\_\_ Paise  
 $\because 1 \text{ rupee} = 100 \text{ paise}$   
 $\therefore \text{Rs } 15.15 = 15 \times 100 \text{ paise} + 15 \text{ paise}$   
 $= 1500 \text{ paise} + 15 \text{ paise}$   
 $= 1515 \text{ paise}$
- (c) 2 days = \_\_\_\_ hours  
 $\because 1 \text{ day} = 24 \text{ hours}$   
 $\therefore 2 \text{ days} = 2 \times 24 \text{ hours}$   
 $= 48 \text{ hours}$
- (d) 3 weeks = \_\_\_\_ days  
 $\because 1 \text{ week} = 7 \text{ days}$   
 $\therefore 3 \text{ weeks} = 3 \times 7 \text{ days}$   
 $= 21 \text{ days}$
- (e) 2 metres = \_\_\_\_ cm  
 $\because 1 \text{ metre} = 100 \text{ cm}$   
 $\therefore 2 \text{ metres} = 2 \times 100 \text{ cm}$   
 $= 200 \text{ cm}$

$$\begin{aligned}
 \text{(f)} \quad 400 \text{ cm} &= \underline{\hspace{1cm}} \text{ m} \\
 \therefore 100 \text{ cm} &= 1 \text{ m} \\
 \therefore 400 \text{ cm} &= (400 \div 100) \text{ m} \\
 &= 4 \text{ m}
 \end{aligned}$$

$$\begin{array}{r}
 100 \overline{) 400} \begin{array}{l} 4 \\ 0 \\ 0 \end{array} \begin{array}{l} 4 \\ 0 \\ 0 \end{array} \\
 \underline{- 400} \phantom{0} \\
 0
 \end{array}$$

$$\begin{aligned}
 \text{(g)} \quad 5 \text{ kg} &= \underline{\hspace{1cm}} \text{ g} \\
 \therefore 1 \text{ kg} &= 1000 \text{ g} \\
 \therefore 5 \text{ kg} &= 5 \times 1000 \text{ g} \\
 &= 5000 \text{ g}
 \end{aligned}$$

$$\begin{aligned}
 \text{(h)} \quad 3000 \text{ g} &= \underline{\hspace{1cm}} \text{ kg} \\
 \therefore 1000 \text{ g} &= 1 \text{ kg} \\
 \therefore 3000 \text{ g} &= (3000 \div 1000) \text{ kg} \\
 &= 3 \text{ kg}
 \end{aligned}$$

$$\begin{aligned}
 \text{(i)} \quad 4 \text{ L} &= \underline{\hspace{1cm}} \text{ mL} \\
 \therefore 1 \text{ L} &= 1000 \text{ mL} \\
 \therefore 4 \text{ L} &= 4 \times 1000 \text{ mL} \\
 &= 4000 \text{ mL}
 \end{aligned}$$

$$\begin{aligned}
 \text{(j)} \quad 4000 \text{ mL} &= \underline{\hspace{1cm}} \text{ L} \\
 \therefore 1000 \text{ mL} &= 1 \text{ L} \\
 \therefore 4000 \text{ mL} &= (4000 \div 1000) \text{ L} \\
 &= 4 \text{ L}
 \end{aligned}$$

## 6. Convert :

$$\begin{aligned}
 \text{(a)} \quad &1 \text{ hour } 20 \text{ minutes to minutes} & \text{(b)} \quad &3 \text{ days } 12 \text{ hours to hours} \\
 \therefore 1 \text{ hour} &= 60 \text{ minutes} & \therefore 1 \text{ day} &= 24 \text{ hours} \\
 \therefore 1 \text{ hour } 20 \text{ minutes} & & \therefore 3 \text{ days} &= 3 \times 24 \text{ hours} \\
 &= 60 \text{ minutes} + 20 \text{ minutes} & &= 72 \text{ hours} \\
 &= 80 \text{ minutes} & \therefore 3 \text{ days } 12 \text{ hours} & \\
 & & &= 72 \text{ hours} + 12 \text{ hours} \\
 & & &= 84 \text{ hours}
 \end{aligned}$$

$$\begin{aligned}
 \text{(c)} \quad &4 \text{ months } 5 \text{ days to days} & \text{(d)} \quad &2 \text{ weeks } 4 \text{ days to days} \\
 \therefore 1 \text{ month} &= 30 \text{ days} & \therefore 1 \text{ week} &= 7 \text{ days} \\
 \therefore 4 \text{ months} &= 4 \times 30 \text{ days} = 120 \text{ days} & \therefore 2 \text{ weeks} &= 2 \times 7 \text{ days} = 14 \text{ days} \\
 \therefore 4 \text{ months } 5 \text{ days} & & \therefore 2 \text{ weeks } 4 \text{ days} & \\
 &= 120 \text{ days} + 5 \text{ days} & &= 14 \text{ days} + 4 \text{ days} \\
 &= 125 \text{ days} & &= 18 \text{ days}
 \end{aligned}$$

$$\begin{aligned}
 \text{(e)} \quad &3 \text{ L } 500 \text{ mL to mL} \\
 \therefore 1 \text{ L} &= 1000 \text{ mL} \\
 \therefore 3 \text{ L} &= 3 \times 1000 \text{ mL} = 3000 \text{ mL} \\
 \therefore 3 \text{ L } 500 \text{ mL} &= 3000 \text{ mL} + 500 \text{ mL} \\
 &= 3500 \text{ mL}
 \end{aligned}$$

(f) 5632 mL to L and mL  
 $\therefore 1000 \text{ mL} = 1 \text{ L}$   
 $\therefore 5632 \text{ mL} = (5632 \div 1000) \text{ L}$   
 $= 5 \text{ L } 632 \text{ mL}$

$$\begin{array}{r} 5 \\ 1000 \overline{) 5632} \\ \underline{- 5000} \\ 632 \end{array}$$

(g) 2 kg 350 g to g  
 $\therefore 1 \text{ kg} = 1000 \text{ g}$   
 $\therefore 2 \text{ kg} = 2 \times 1000 \text{ g} = 2000 \text{ g}$   
 $\therefore 2 \text{ kg } 350 \text{ g} = 2000 \text{ g} + 350 \text{ g}$   
 $= 2350 \text{ g}$

(h) 3525 g to kg and g  
 $\therefore 1000 \text{ g} = 1 \text{ kg}$   
 $\therefore 3525 \text{ g} = (3525 \div 1000) \text{ kg}$   
 $= 3 \text{ kg } 525 \text{ g}$

$$\begin{array}{r} 3 \\ 1000 \overline{) 3525} \\ \underline{- 3000} \\ 525 \end{array}$$

(i) 3 m 65 cm to cm  
 $\therefore 1 \text{ m} = 100 \text{ cm}$   
 $\therefore 3 \text{ m} = 3 \times 100 \text{ cm} = 300 \text{ cm}$   
 $\therefore 3 \text{ m } 65 \text{ cm} = 300 \text{ cm} + 65 \text{ cm}$   
 $= 365 \text{ cm}$

(j) 825 cm to m and cm  
 $\therefore 100 \text{ cm} = 1 \text{ m}$   
 $\therefore 825 \text{ cm} = (825 \div 100) \text{ m}$   
 $= 8 \text{ m } 25 \text{ cm}$

$$\begin{array}{r} 8 \\ 100 \overline{) 825} \\ \underline{- 800} \\ 25 \end{array}$$

7. Find :

(a)

|    |    |   |   |   |   |   |   |   |   |   |   |
|----|----|---|---|---|---|---|---|---|---|---|---|
| Rs | 1  | 5 | . | 5 | 0 |   |   |   |   |   |   |
| +  | Rs | 1 | 3 | 2 | . | 2 | 5 |   |   |   |   |
|    |    |   |   |   |   | 1 | 4 | 7 | . | 7 | 5 |

$\therefore \text{Rs } 15.50 + \text{Rs } 132.25 = \text{Rs } 147.75$

(b)

|    |    |   |   |   |   |   |   |   |   |   |
|----|----|---|---|---|---|---|---|---|---|---|
| Rs | 7  | 8 | . | 7 | 5 |   |   |   |   |   |
| -  | Rs | 3 | 5 | . | 2 | 0 |   |   |   |   |
|    |    |   |   |   |   | 4 | 3 | . | 5 | 5 |

$\therefore \text{Rs } 78.75 - \text{Rs } 35.20 = \text{Rs } 43.55$

(c)

|    |   |   |     |    |
|----|---|---|-----|----|
|    | ③ | ② | ④   |    |
| Rs | 5 | 4 | .2  | 5  |
|    |   |   | × 8 |    |
|    | 4 | 3 | 4   | .0 |
|    |   |   | 0   | 0  |

∴ Rs 54.25 × 8 = 434.00

(d)

|   |   |   |    |   |
|---|---|---|----|---|
|   | 8 | . | 0  | 5 |
| 9 | 7 | 2 | .4 | 5 |
| - | 7 | 2 |    |   |
|   | 0 | . | 4  | 5 |
|   |   |   | -4 | 5 |
|   |   |   |    | 0 |

∴ Rs 72.45 ÷ 9 = Rs 8.05

8. Weight of potatoes = 2 kg 500g  
 Weight of tomatoes = 1 kg  
 Weight of spinach = 250g  
 The total weight of the vegetables  
 = 2 kg 500g + 1 kg + 250g  
 = 3 kg 750g

|    |   |   |
|----|---|---|
| Kg |   | g |
| 2  | 5 | 0 |
| +  | 1 | 0 |
| +  | 0 | 2 |
|    | 3 | 7 |
|    |   | 5 |

9. A tailor has a piece of cloth = 5 m 50 cm  
 Tailor used cloth to make a kurta = 2 m 25 cm  
 Cloth left = 5 m 50 cm - 2 m 25 cm  
 = 3 m 25 cm

|   |    |
|---|----|
| m | cm |
| 5 | 50 |
| - | 2  |
|   | 25 |
| 3 | 25 |

10. A milkman gives milk in each house = 3 L 250 mL  
 Number of houses = 8  
 Milkman distributed per day milk = 3 L 250 mL × 8  
 = 26 L

|   |     |
|---|-----|
| L | mL  |
| 3 | 250 |
|   | × 8 |
| 2 | 6   |
|   | 0   |

11. Amit cover a distance in 6 days = 24 km 600 m  
 Amit travelled daily distance = 24 km 600 m ÷ 6  
 = 4 km 100 m

|   |   |    |     |   |
|---|---|----|-----|---|
|   | 4 | km | 100 | m |
| 6 | 2 | 4  | km  | 6 |
| - | 2 | 4  |     |   |
|   | 0 |    | 6   |   |
|   |   |    | -6  |   |
|   |   | 0  | 0   | 0 |
|   |   |    | -0  | 0 |
|   |   |    |     | 0 |

12. Take ☺ = 2 children

| Name of Vehicle | Number of Children |
|-----------------|--------------------|
| By car          | ☺ ☺ ☺              |
| By Bus          | ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺    |
| By Bike         | ☺ ☺ ☺ ☺ ☺ ☺        |
| By Rickshaw     | ☺ ☺ ☺ ☺ ☺ ☺ ☺      |
| By Bicycle      | ☺ ☺                |

**13. Look at Pictograph and fill in the blanks.**

- The number of children who like football is 8.
- The number of children who like basket ball is 10.
- Which game is most popular cricket.
- The number of children who like least popular game is 4.
- Difference between the number of children who like cricket and badminton is 10.



## Numbers



### Exercise 2A

**1. Write in expanded form.**

- $53,348 \rightarrow 50000 + 3000 + 300 + 40 + 8$
- $6,05,892 \rightarrow 600000 + 0 + 5000 + 800 + 90 + 2$
- $23,57,187 \rightarrow 2000000 + 300000 + 50000 + 7000 + 100 + 80 + 7$
- $7,84,51,789 \rightarrow 70000000 + 8000000 + 400000 + 50000 + 1000 + 700 + 80 + 9$
- $27,05,38,193 \rightarrow 200000000 + 70000000 + 0 + 500000 + 30000 + 8000 + 100 + 90 + 3$
- $35,64,27,365 \rightarrow 300000000 + 50000000 + 6000000 + 400000 + 20000 + 7000 + 300 + 60 + 5$

**2. Write in short form :**

- |   |          |
|---|----------|
| (a) $70000 + 3000 + 500 + 80 + 6$                               | 73586    |
| (b) $400000 + 60000 + 2000 + 700 + 30 + 5$                      | 462735   |
| (c) $5000000 + 700000 + 40000 + 1000 + 0 + 80 + 3$              | 5741083  |
| (d) $60000000 + 9000000 + 300000 + 50000 + 4000 + 200 + 30 + 3$ | 69354233 |
| (e) $70000000 + 0 + 0 + 30000 + 8000 + 900 + 60 + 5$            | 70038965 |
| (f) $80000000 + 2000000 + 400000 + 0 + 5000 + 300 + 70 + 9$     | 82405379 |

**3. Rewrite the numbers with commas, separating the periods :**

- |                       |                            |
|-----------------------|----------------------------|
| (a) 321475 = 3,21,475 | (b) 693000 = 6,93,000      |
| (c) 978123 = 9,78,123 | (d) 98765432 = 9,87,65,432 |

- (e) 5725125 =  (f) 444444 =
- (g) 5678912 =  (h) 12345678 =
- (i) 39248 =  (j) 32570694 =
- (k) 3000357 =  (l) 50604030 =

4. Write in figures (place-value chart):

- |     | TC                   | C                    | TL                   | L                    | TTh | Th | H | T | O |
|-----|----------------------|----------------------|----------------------|----------------------|-----|----|---|---|---|
| (a) | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | 4   | 0  | 7 | 3 | 5 |
| (b) | <input type="text"/> | <input type="text"/> | <input type="text"/> | 4                    | 1   | 8  | 6 | 4 | 7 |
| (c) | <input type="text"/> | <input type="text"/> | 3                    | 6                    | 1   | 9  | 8 | 5 | 2 |
| (d) | <input type="text"/> | 2                    | 6                    | 7                    | 3   | 4  | 0 | 1 | 8 |
| (e) | <input type="text"/> | 9                    | 0                    | 0                    | 0   | 0  | 0 | 0 | 0 |
| (f) | <input type="text"/> | <input type="text"/> | 1                    | 2                    | 1   | 3  | 0 | 1 | 4 |

5. Write in figures:

- (a) Seventeen thousand nine hundred and seven
- (b) Eighty four thousand five hundred
- (c) Twenty five thousand and twenty five
- (d) Fifty thousand five hundred and five
- (e) Six lakh seventy three thousand four hundred and ten
- (f) Forty three lakh eighty hundred

6. Write in words:

- (a) 42,05,378
- (b) 8,00,000
- (c) 85,00,500
- (d) 67,895
- (e) 6,53,320
- (f) 8,93,865

7. Write the predecessor (just before):

- (a)  65,499 (b)  83,400 (c)  2,40,501
- (d)  37,585 (e)  3,89,740 (f)  53,08,000

8. Write the successor (just after) :

- (a) 39,999 | 40,000 | (b) 83,794 | 83,795 | (c) 63,89,999 | 63,90,000 |  
 (d) 56,009 | 56,010 | (e) 99,999 | 1,00,000 | (f) 54,37,310 | 54,37,311 |

9. Write the numbers just before and after :

- (a) | 23699 | 23700 | 23701 | (b) | 34999 | 35000 | 35001 |  
 (c) | 354999 | 355000 | 355001 | (d) | 899999 | 900000 | 900001 |  
 (e) | 1234566 | 1234567 | 1234568 | (f) | 39459 | 39460 | 39461 |

10. Write the consecutive numbers that comes after :

- (a) 67,537 | 67,538 | 67,539 | 67,540 | 67,541 | 67,542 |  
 (b) 79,998 | 79,999 | 80,000 | 80,001 | 80,002 | 80,003 |  
 (c) 1,23,684 | 1,23,685 | 1,23,686 | 1,23,687 | 1,23,688 | 1,23,689 |  
 (d) 28,54,876 | 28,54,877 | 28,54,878 | 28,54,879 | 28,54,880 | 28,54,881 |  
 (e) 64,25,269 | 64,25,270 | 64,25,271 | 64,25,272 | 64,25,273 | 64,25,274 |  
 (f) 1,05,08,312 | 1,05,08,313 | 1,05,08,314 | 1,05,08,315 | 1,05,08,316 | 1,05,08,317 |

11. Write the number in between :

- (a) 21,000 | 21,001 | 21,002 | (b) 7,32,508 | 7,32,509 | 7,32,510 |  
 (c) 8,01,199 | 8,01,200 | 8,01,201 | (d) 39,999 | 40,000 | 40,001 |  
 (e) 56,78,998 | 56,78,999 | 56,79,000 | (f) 29,99,999 | 30,00,000 | 30,00,001 |



## Exercise 2B

1. Write the place value of the digit in numbers :

- (a) 38,467 ⇒ | 7 7 | | 6 60 | | 4 400 | | 8 8000 | | 3 30000 |  
 (b) 86,374 ⇒ | 7 70 | | 3 300 | | 8 80000 | | 6 6000 | | 4 4 |  
 (c) 2,04,689 ⇒ | 8 80 | | 4 4000 | | 0 0 | | 6 600 | | 2 200000 |  
 (d) 7,14,680 ⇒ | 6 600 | | 8 80 | | 1 10000 | | 4 4000 | | 7 700000 |  
 (e) 43,50,861 ⇒ | 3 300000 | | 5 50000 | | 0 0 | | 4 4000000 | | 6 60 |  
 (f) 89,67,534 ⇒ | 3 30 | | 7 7000 | | 9 900000 | | 5 500 | | 6 60000 |

2. Fill in the blanks :

- (a) In 24,357; 3 is in the **hundred** place, and 2 is in the **ten thousand** place.  
 (b) In 3,74,526; 7 is in the **ten thousand** place, and 3 is in the **lakh** place.  
 (c) In 8,30,59,472; 8 is in the **crore** place, and 0 is in the **ten lakh** place.



- (d) In 72,365; the digit in the thousands place is **2** and its place value is **2000**.
- (e) In 3,98,412; the digit in the lakhs place is **3** and its place value is **300000**.
- (f) In 36,58,240; the digit in the lakhs place is **6** and that in ten lakhs place is **3**.

**3. Write >, < or =:**

- (a) 37555  55537 (b) 7563499  7563499
- (c) 35600394  35610394 (d) 4040404  404000404
- (e) 218645  21864 (f) 12345678  12345679

**4. Write the smallest and largest number among the given numbers :**

|  | Smallest      | Largest        |
|--|---------------|----------------|
| (a) 7375093, 792850, 3475093, 50000, 8601325 | <u>50000</u>  | <u>8601325</u> |
| (b) 1735100, 1735300, 32049, 560179, 44933   | <u>32049</u>  | <u>1735300</u> |
| (c) 3780947, 536247, 1413151, 141315, 490178 | <u>141315</u> | <u>3780947</u> |
| (d) 123456, 123465, 123546, 123564, 123645   | <u>123456</u> | <u>123645</u>  |

**5. Write in ascending order:**

- (a) 53278, 46352, 817325, 35364, 739516  
35364, 46352, 53278, 739516, 817325
- (b) 680680, 680860, 860860, 860680, 806860  
680680, 680860, 806860, 860680, 860860
- (c) 735089, 753089, 75089, 389075, 753098  
75089, 389075, 735089, 753089, 753098
- (d) 540683, 450658, 540863, 504836, 540836  
450658, 504836, 540683, 540836, 540863

**6. Write in descending order:**

- (a) 85364, 58643, 85634, 58346, 58436  
85634, 85364, 58643, 58436, 58346
- (b) 800000, 8000000, 70000000, 90000, 98700  
70000000, 8000000, 800000, 98700, 90000
- (c) 9012, 70358, 364208, 79036, 112345  
364208, 112345, 79036, 70358, 9012
- (d) 73250, 36450, 106350, 84370, 2463750  
2463750, 106350, 84370, 73250, 36450

7. Make the smallest and greatest numbers using all the given digits :

|                         | Smallest       | Largest        |
|-------------------------|----------------|----------------|
| (a) 2, 0, 3, 7, 9       | <u>20379</u>   | <u>97320</u>   |
| (b) 5, 7, 2, 4, 6, 0    | <u>204567</u>  | <u>765420</u>  |
| (c) 1, 7, 8, 2, 3, 9    | <u>123789</u>  | <u>987321</u>  |
| (d) 6, 0, 5, 1, 0, 8, 0 | <u>1000568</u> | <u>8651000</u> |

8. Continue the pattern :

|                                      |                 |                 |                 |
|--------------------------------------|-----------------|-----------------|-----------------|
| (a) 42,370 ; 42,470 ; 42,570 ;       | <u>42,670</u>   | <u>42,770</u>   | <u>42,870</u>   |
| (b) 1,30,456 ; 1,31,456 ; 1,32,456 ; | <u>1,33,456</u> | <u>1,34,456</u> | <u>1,35,456</u> |
| (c) 5,39,412 ; 5,39,422 ; 5,39,432 ; | <u>5,39,442</u> | <u>5,39,452</u> | <u>5,39,462</u> |
| (d) 78,987 ; 78,887 ; 78,787 ;       | <u>78,687</u>   | <u>78,587</u>   | <u>78,487</u>   |



## Exercise 2C

1. Write the international number name of the given numbers :

|                  |             |                             |
|------------------|-------------|-----------------------------|
| (a) One thousand | 1000        | <u>One thousand</u>         |
| (b) Ten thousand | 10,000      | <u>Ten thousand</u>         |
| (c) One lakh     | 1,00,000    | <u>One hundred thousand</u> |
| (d) Ten lakh     | 10,00,000   | <u>One million</u>          |
| (e) Eighty lakh  | 80,00,000   | <u>Eight million</u>        |
| (f) Four crore   | 4,00,00,000 | <u>Forty millions</u>       |

2. Rounding off each of the following to the nearest ten.

- (a) 72 → 70      one's digit is 2 < 5  
 (b) 86 → 90      one's digit is 6 > 5  
 (c) 347 → 350      one's digit is 7 > 5  
 (d) 563 → 560      one's digit is 3 < 5  
 (e) 4849 → 4850      one's digit is 9 > 5  
 (f) 12375 → 12380      one's digit is 5 = 5

3. Rounding off each of the following to the nearest hundred.

- (a) 491 → 500      ten's digit is 9, rounding up  
 (b) 3728 → 3700      ten's digit is 2, rounding down

- (c) 89371 → 89400 ten's digit is 7, rounding up  
 (d) 302538 → 302500 ten's digit is 3, rounding down  
 (e) 6402183 → 6402200 ten's digit is 8, rounding up  
 (f) 7295073 → 7295100 ten's digit is 7, rounding up

**4. Rounding off each of the following to the nearest thousand.**

- (a) 950 → 1000 hundred's digit 9 > 5  
 (b) 3245 → 3000 hundred's digit 2 < 5  
 (c) 84762 → 85000 hundred's digit 7 > 5  
 (d) 295371 → 295000 hundred's digit 3 < 5  
 (e) 3046888 → 3047000 hundred's digit 8 > 5  
 (f) 437504 → 438000 hundred's digit 5 = 5

**5. Rounding off 43,997 to the nearest 10, 100 and 1000. What do you observe?**

- 43,997 → 44,000 one's digit is 7 > 5  
 43,997 → 44,000 ten's digit is 9, rounding up  
 43,997 → 44,000 hundred's digit 9 > 5  
 ∴ 44,000; 44,000; 44,000 All are equal.

**6. Find the difference between place value of digit-7 in 5736708.**

5736708 place value of 7 is 700000.

5736708 place value of 7 is 700.

∴ Difference between = 700000 – 700 = 699300



## Exercise 2D

**1. Write using Hindu-Arabic numerals:**

- (a) 

|    |     |    |    |      |     |     |     |     |      |
|----|-----|----|----|------|-----|-----|-----|-----|------|
| IV | VII | IX | XI | XIII | XIV | XVI | XIX | XXI | XXIV |
| 4  | 7   | 9  | 11 | 13   | 14  | 16  | 19  | 21  | 24   |
- (b) 

|      |       |      |        |      |      |       |      |    |      |
|------|-------|------|--------|------|------|-------|------|----|------|
| XVII | XXIII | XXVI | XXVIII | XXXI | XXXV | XXXVI | XLVI | XL | XLIX |
| 17   | 23    | 26   | 28     | 31   | 35   | 36    | 46   | 40 | 49   |
- (c) 

|       |      |    |      |       |       |    |     |     |     |
|-------|------|----|------|-------|-------|----|-----|-----|-----|
| XXXIV | XLIV | LX | LXXX | LXXIV | LXXIX | XC | XCV | CD  | CCC |
| 34    | 44   | 60 | 80   | 74    | 79    | 90 | 95  | 400 | 300 |

2. Write using Roman numerals :

|     |    |    |     |      |    |    |      |     |     |     |
|-----|----|----|-----|------|----|----|------|-----|-----|-----|
| (a) | 2  | 4  | 7   | 8    | 9  | 10 | 13   | 14  | 16  | 19  |
|     | II | IV | VII | VIII | IX | X  | XIII | XIV | XVI | XIX |

|     |     |     |       |        |       |      |       |      |         |       |
|-----|-----|-----|-------|--------|-------|------|-------|------|---------|-------|
| (b) | 21  | 25  | 27    | 28     | 32    | 29   | 34    | 40   | 38      | 39    |
|     | XXI | XXV | XXVII | XXVIII | XXXII | XXIX | XXXIV | XXXX | XXXVIII | XXXIX |

|     |       |     |      |      |     |          |     |      |      |     |
|-----|-------|-----|------|------|-----|----------|-----|------|------|-----|
| (c) | 36    | 41  | 44   | 49   | 70  | 88       | 91  | 94   | 99   | 200 |
|     | XXXVI | XLI | XLIV | XLIX | LXX | LXXXVIII | XCI | XCIV | XCIX | CC  |

3. Fill in the blanks using '>' or '<' (compare) :

- (a) IX  VIII      (b) XI  IX      (c) XIV  XVI  
 (d) XXIV  XXIX      (e) XL  LX      (f) XXX  XL

4. Compare the following using '<', '>' and '=' :

- (a) IX  11      (b) XIV  16      (c) XXII  32  
 (d) LXI  40 + 1      (e) XLIV  44      (f) XIX  3 × 7

5. Fill in the boxes :

- (a) VII + IV = \_\_\_\_  
 $\therefore$  VII = 7, IV = 4  
 7 + 4 = 11  
 $\therefore$  VII + IV = XI
- (b) XIX - VII = \_\_\_\_  
 $\therefore$  XIX = 19, VII = 7  
 19 - 7 = 12  
 $\therefore$  XIX - VII = XII
- (c) XXIV ÷ VI = \_\_\_\_  
 $\therefore$  XXIV = 24, VI = 6  
 24 ÷ 6 = 4  
 $\therefore$  XXIV ÷ VI = IV
- (d) VIII × VI = \_\_\_\_  
 $\therefore$  VIII = 8, VI = 6  
 8 × 6 = 48  
 $\therefore$  VIII × VI = XLVIII
- (e) XLVIII ÷ XII = \_\_\_\_  
 $\therefore$  XLVIII = 48, XII = 12  
 48 ÷ 12 = 4  
 $\therefore$  XLVIII ÷ XII = IV
- (f) XXIX + XLI = \_\_\_\_  
 $\therefore$  XXIX = 29, XLI = 41  
 29 + 41 = 70  
 $\therefore$  XXIX + XLI = LXX

6. Write the answers in Roman numerals :

- (a) 9 × 5 =       (b) 72 ÷ 8 =       (c) 24 + 37 =   
 (d) 8 × 7 =       (e) 69 - 28 =       (f) 36 + 19 =

7. Write in ascending order :

- (a) X, L, XL, XC, LX, LXX
- |   |    |   |    |     |    |
|---|----|---|----|-----|----|
| X | XL | L | LX | LXX | XC |
|---|----|---|----|-----|----|
- (b) XIX, XVI, XXI, XIV, LIX, LXI
- |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| XIV | XVI | XIX | XXI | LIX | LXI |
|-----|-----|-----|-----|-----|-----|
- (c) XXIX, XXVI, XLI, LIX, XLVI, XXIV
- |      |      |     |      |      |     |
|------|------|-----|------|------|-----|
| XXIV | XXVI | XLI | XXIX | XLVI | LIX |
|------|------|-----|------|------|-----|

8. Write in descending order:

(a) X, XL, LX, L, XC, XLV

(b) XIX, XXI, XVI, XIV, LIX, LXI

(c) XXV, XXIX, XXIV, LIX, XLI, XLVI

|     |      |     |      |     |      |
|-----|------|-----|------|-----|------|
| XC  | LX   | L   | XLV  | XL  | X    |
| LXI | LIX  | XXI | XIX  | XVI | XIV  |
| LIX | XLVI | XLI | XXIX | XXV | XXIV |



Maths Fun

Reflection, Problem-solving, Observation

Do yourself.

### Apply Your Learning

Critical and Logical Thinking, Problem-solving

Put the correct sign >, < or = in the blanks.

(i) 63,276 < 64,023

(ii) 1,00,923 > 10,092

(iii) 4,07,035 < 4,07,253

### Think, Solve and Learn

Integrate with Language, Observation

Do yourself.



## Addition and Subtraction



### Exercise 3A

1. Add the following:

| L     | TTh | Th | H | T | O |
|-------|-----|----|---|---|---|
| 5     | 2   | 7  | 4 | 3 |   |
| +     | 2   | 6  | 1 | 5 | 2 |
| <hr/> |     |    |   |   |   |
| 7     | 8   | 8  | 9 | 5 |   |

| L     | TTh | Th | H | T | O |
|-------|-----|----|---|---|---|
| 2     | 4   | 3  | 5 | 0 |   |
| +     | 5   | 3  | 2 | 4 | 8 |
| <hr/> |     |    |   |   |   |
| 7     | 7   | 5  | 9 | 8 |   |

| L     | TTh | Th | H | T | O |
|-------|-----|----|---|---|---|
| 8     | 3   | 5  | 0 | 6 |   |
| +     | 6   | 3  | 9 | 2 |   |
| <hr/> |     |    |   |   |   |
| 8     | 9   | 8  | 9 | 8 |   |

2. Add the following:

| L     | TTh | Th | H | T | O |
|-------|-----|----|---|---|---|
| 2     | 4   | 5  | 7 | 0 | 1 |
| +     | 5   | 1  | 2 | 2 | 8 |
| <hr/> |     |    |   |   |   |
| 7     | 5   | 7  | 9 | 8 | 4 |

| L     | TTh | Th | H | T | O |
|-------|-----|----|---|---|---|
| 6     | 3   | 7  | 4 | 5 | 2 |
| +     | 2   | 4  | 0 | 2 | 3 |
| <hr/> |     |    |   |   |   |
| 8     | 7   | 7  | 6 | 8 | 7 |

| L     | TTh | Th | H | T | O |
|-------|-----|----|---|---|---|
| 3     | 2   | 8  | 4 | 5 |   |
| +     | 6   | 4  | 7 | 0 | 2 |
| <hr/> |     |    |   |   |   |
| 6     | 7   | 9  | 8 | 6 | 8 |

3. Fill in the blanks:

(a)  $42750 + 18423 = 18423 + \underline{42750}$

(b)  $134045 + \underline{243844} = 243844 + 134045$

(c)  $37508 + \underline{0} = 37508$

(d)  $314527 + 251323 = \underline{251323} + 314527$

(e)  $903264 + \underline{43525} = 43525 + 903264$

(f)  $\underline{0} + 82195 = 82195$

4. Add the following by changing into figures and write the answer in words:

(a)  $\therefore$  7123 and 81565

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

→ Eighty eight thousand six hundred and eighty eight

(b)  $\therefore$  34256 and 45612

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

→ Seventy nine thousand eight hundred and sixty eight

(c)  $\therefore$  231409 and 565080

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

→ Seven lakh ninety six thousand four hundred and eighty nine

(d)  $\therefore$  507035 and 30642

|   | L | TTh | Th | H | T | O |
|---|---|-----|----|---|---|---|
|   | 5 | 0   | 7  | 0 | 3 | 5 |
| + | 3 | 0   | 6  | 4 | 2 |   |
|   | 5 | 3   | 7  | 6 | 7 | 7 |

→ Five lakh thirty seven thousand six hundred and seventy seven

5. Find the sum:

|     | L | TTh | Th | H | T | O |
|-----|---|-----|----|---|---|---|
| (a) |   | 2   | 1  | 2 | 4 | 0 |
| +   |   | 7   | 6  | 2 | 1 | 2 |
| +   |   |     | 4  | 3 | 0 | 0 |
|     |   | 7   | 8  | 7 | 6 | 6 |

|     | L | TTh | Th | H | T | O |
|-----|---|-----|----|---|---|---|
| (b) |   | 1   | 2  | 0 | 3 | 1 |
| +   |   | 2   | 1  | 4 | 5 | 6 |
| +   |   | 2   | 4  | 3 | 1 | 0 |
|     |   | 5   | 7  | 7 | 9 | 7 |

|     | L | TTh | Th | H | T | O |
|-----|---|-----|----|---|---|---|
| (c) |   | 4   | 1  | 3 | 2 | 3 |
| +   |   | 1   | 2  | 2 | 0 | 2 |
| +   |   | 2   | 3  | 1 | 5 | 3 |
|     |   | 7   | 6  | 6 | 7 | 8 |

|     | TTh | Th | H | T | O |
|-----|-----|----|---|---|---|
| (d) |     | 2  | 2 | 1 | 2 |
| +   |     | 4  | 2 | 5 | 1 |
| +   |     | 2  | 1 | 1 | 5 |
| +   |     | 1  | 3 | 0 | 1 |
|     |     | 9  | 8 | 7 | 9 |

(e)

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

(f)

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



## Exercise 3B

1. Add the following:

(a)

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

(b)

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

(c)

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

2. Add the following:

(a)

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

(b)

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

(c)

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

3. Add the following:

(a)

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

(b)

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

(c)

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

4. Find sum:

(a)

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

(b)

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

|     | TL | L | TTh | Th | H | T | O |
|-----|----|---|-----|----|---|---|---|
| (c) |    | ① | ①   | ①  | ① | ① |   |
|     | 8  | 3 | 4   | 5  | 2 | 3 | 7 |
| +   |    | 4 | 5   | 3  | 2 | 6 | 8 |
| +   | 3  | 1 | 4   | 2  | 6 | 4 | 0 |
| +   |    |   | 3   | 2  | 1 | 2 | 2 |
|     | 1  | 1 | 9   | 7  | 3 | 2 | 6 |

|     | TL | L | TTh | Th | H | T | O |
|-----|----|---|-----|----|---|---|---|
| (d) |    |   | ②   | ①  |   |   |   |
|     |    |   | 9   | 3  |   |   |   |
| +   |    |   | 2   | 3  | 7 |   |   |
| +   |    | 3 | 7   | 2  | 3 | 4 |   |
| +   | 5  | 3 | 2   | 0  | 1 | 4 | 5 |
|     | 5  | 3 | 5   | 7  | 7 | 0 | 9 |

5. Fill the missing digits:

|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| (a) | 5 | 9 | 7 | 6 | 4 |
| +   | 2 | 3 | 4 | 4 | 3 |
|     | 8 | 3 | 2 | 0 | 7 |

|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| (b) | 3 | 5 | 7 | 2 | 5 |
| +   | 2 | 3 | 4 | 8 | 3 |
|     | 5 | 9 | 2 | 0 | 8 |

|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| (c) | 8 | 7 | 4 | 4 | 0 |
| +   |   | 5 | 3 | 8 | 5 |
|     | 9 | 2 | 8 | 2 | 5 |

6. Fill the missing digits:

|     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| (a) | 2 | 3 | 5 | 4 | 2 | 5 |
| +   | 1 | 3 | 7 | 3 | 5 | 4 |
| +   | 3 | 3 | 2 | 6 | 8 | 2 |
|     | 7 | 0 | 5 | 4 | 6 | 1 |

|     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| (b) | 6 | 4 | 8 | 3 | 2 | 1 |
| +   | 3 | 6 | 5 | 8 | 5 | 8 |
| +   | 2 | 4 | 4 | 2 | 4 | 6 |
|     | 1 | 2 | 5 | 8 | 4 | 5 |

|     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| (c) | 2 | 3 | 7 | 8 | 9 | 7 |
| +   | 4 | 4 | 5 | 4 | 6 | 3 |
| +   | 1 | 2 | 3 | 0 | 2 | 2 |
|     | 8 | 0 | 6 | 3 | 8 | 2 |



### Exercise 3C

1. A school spend on cultural affairs = ₹ 175450

A school spend on sports = ₹ 225690

Total spend = ₹ 175450 + ₹ 225690

= ₹ 401140

∴ The school spend money ₹ 401140.

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| ₹ | 1 | 7 | 5 | 4 | 5 | 0 |
| + | ₹ | 2 | 2 | 5 | 6 | 9 |
|   | 4 | 0 | 1 | 1 | 4 | 0 |

2. Amit earns yearly = ₹ 238745

Kamal earns more than Amit in a year = ₹ 10355

Kamal earn in a year = ₹ 238745 + ₹ 10355

= ₹ 249100

∴ Kamal earn in a year ₹ 249100.

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| ₹ | 2 | 3 | 8 | 7 | 4 | 5 |
| + | ₹ | 1 | 0 | 3 | 5 | 5 |
|   | 2 | 4 | 9 | 1 | 0 | 0 |



|                              |                  |
|------------------------------|------------------|
| 3. Number of bags of wheat = | 2 3 4 5 9        |
| Number of bags of rice =     | + 5 7 2 3        |
| Number of bags of sugar =    | + 9 7 3          |
| Total number of bags         | <u>3 0 1 5 5</u> |

∴ 30155 the total number of bags of food items in the godown.

|  |                      |
|--|----------------------|
| 4. A chocolate company sold chocolates in first year = | 2 6 3 0 4 5 0        |
| A chocolate company sold chocolates in second year =   | + 1 2 7 6 8 4 0      |
| A chocolate company sold chocolates in third year =    | + 9 2 0 5 9 0        |
| Total chocolates sold in three years =                 | <u>4 8 2 7 8 8 0</u> |

∴ A chocolate company sold 4827880 chocolates in three years.

|                                     |                    |
|-------------------------------------|--------------------|
| 5. The sum of 2,43,687 and 3,76,933 | 2 4 3 6 8 7        |
|                                     | + 3 7 6 9 3 3      |
|                                     | <u>6 2 0 6 2 0</u> |

More than their Sun is  $620620 + 78250$   
 ∴ The number is 698870.

|                    |
|--------------------|
| 6 2 0 6 2 0        |
| + 7 8 2 5 0        |
| <u>6 9 8 8 7 0</u> |

|  |                    |
|--|--------------------|
| 6. The largest number of 5-digit = 99999 | 9 9 9 9 9          |
| The smallest number of 4-digit = 1000    | + 1 0 0 0          |
| The sum = $99999 + 1000 = 100999$        | <u>1 0 0 9 9 9</u> |

|                                |                    |
|--------------------------------|--------------------|
| 7. Populations of first town = | 4 8 7 3 5          |
| Populations of second town =   | + 1 0 9 3 4 0      |
| Populations of third town =    | + 7 6 5 8 0        |
| Total populations =            | <u>2 3 4 6 5 5</u> |

∴ Total populations of three towns are 234655.

|  |                    |
|--|--------------------|
| 8. A white coloured car costs = ₹ 498750             | ₹ 4 9 8 7 5 0      |
| A red coloured car costs more than that of white car | + ₹ 2 1 3 8 9 0    |
| = ₹ 213890   | <u>7 1 2 6 4 0</u> |
| Red coloured car costs = ₹ 498750 + ₹ 213890         |                    |
| = ₹ 712640   |                    |

∴ The cost of red coloured car is ₹ 712640.



### Exercise 3D

**1. Estimate the sum by rounding off each number to the nearest hundreds and compare with the actual sum.**

(a) 618 and 485

618 is rounded off to 600 (In nearest 100's)

and 485 is rounded off to 500 (In nearest 100's)

Estimated sum =  $600 + 500 = 1100$

Actual sum =  $618 + 485 = 1103$

Difference =  $1103 - 1100 = 3$  which is minute.

(b) 843 and 357

843 is rounded off to 800 (In nearest 100's)

and 357 is rounded off to 400 (In nearest 100's)

Estimated sum =  $800 + 400 = 1200$

Actual sum =  $843 + 357 = 1200$

Difference =  $1200 - 1200 = 0$

(c) 4145 and 7682

4145 is rounded off to 4100 (In nearest 100's)

and 7682 is rounded off to 7700 (In nearest 100's)

Estimated sum =  $4100 + 7700 = 11800$

Actual sum =  $4145 + 7682 = 11827$

Difference =  $11827 - 11800 = 27$  which is minute.

(d) 17309 and 21689

17309 is rounded off to 17300 (In nearest 100's)

and 21689 is rounded off to 21700 (In nearest 100's)

Estimated sum =  $17300 + 21700 = 39000$

Actual sum =  $17309 + 21689 = 38998$

Difference =  $39000 - 38998 = 2$  which is minute.

(e) 3058, 2716 and 9347

3058 is rounded off to 3100 (In nearest 100's)

2716 is rounded off to 2700 (In nearest 100's)

9374 is rounded off to 9400 (In nearest 100's)

Estimated sum =  $3100 + 2700 + 9400 = 15200$   
 Actual sum =  $3058 + 2716 + 9374 = 15148$   
 Difference =  $15200 - 15148 = 52$  which is minute.

(f) 42793, 36913 and 23274

42793 is rounded off to 42800 (In nearest 100's)  
 36913 is rounded off to 36900 (In nearest 100's)  
 23274 is rounded off to 23300 (In nearest 100's)  
 Estimated sum =  $42800 + 36900 + 23300 = 103000$   
 Actual sum =  $42793 + 36913 + 23274 = 102980$   
 Difference =  $103000 - 102980 = 20$  which is minute.

**2. Estimate the sum by rounding off each number to the nearest thousands and compare with the actual sum.**

(a) 6254 and 2743

6254 is rounded off to 6000 (In nearest 1000's)  
 2743 is rounded off to 3000 (In nearest 1000's)  
 Estimated sum =  $6000 + 3000 = 9000$   
 Actual sum =  $6254 + 2743 = 8997$   
 Difference =  $9000 - 8997 = 3$  which is minute.

(b) 4258 and 3303

4258 is rounded off to 4000 (In nearest 1000's)  
 3303 is rounded off to 3000 (In nearest 1000's)  
 Estimated sum =  $4000 + 3000 = 7000$   
 Actual sum =  $4258 + 3303 = 7561$   
 Difference =  $7561 - 7000 = 561$  which is minute.

(c) 36643 and 45350

36643 is rounded off to 37000 (In nearest 1000's)  
 45350 is rounded off to 45000 (In nearest 1000's)  
 Estimated sum =  $37000 + 45000 = 82000$   
 Actual sum =  $36643 + 45350 = 81993$   
 Difference =  $82000 - 81993 = 7$  which is minute.

(d) 84178 and 37885

84178 is rounded off to 84000 (In nearest 1000's)

37885 is rounded off to 38000 (In nearest 1000's)

Estimated sum =  $84000 + 38000 = 122000$

Actual sum =  $84178 + 37885 = 122063$

Difference =  $122063 - 122000 = 63$  which is minute.

(e) 13825, 34524 and 76367

13825 is rounded off to 14000 (In nearest 1000's)

34524 is rounded off to 35000 (In nearest 1000's)

76367 is rounded off to 76000 (In nearest 1000's)

Estimated sum =  $14000 + 35000 + 76000 = 125000$

Actual sum =  $13825 + 34524 + 76367 = 124716$

Difference =  $125000 - 124716 = 284$  which is minute.

(f) 53283, 74435 and 62636

53283 is rounded off to 53000 [In nearest 1000's]

74435 is rounded off to 74000 [In nearest 1000's]

62636 is rounded off to 63000 [In nearest 1000's]

Estimated sum =  $53000 + 74000 + 63000 = 190000$

Actual sum =  $53283 + 74435 + 62636 = 190354$

Difference =  $190354 - 190000 = 354$  which is minute.

3. Number of men in a town = 58634

Number of women in a town = 49402

58634 is rounded off to 58600 [In nearest 100's]

49402 is rounded off to 49400 [In nearest 100's]

Estimated sum =  $58600 + 49400 = 10800$

$\therefore$  The total number of people in the town = 10800

4. Rajesh deposited in first month = ₹ 123650

Rajesh deposited in second month = ₹ 176430

Rajesh deposited in third month = ₹ 152120

123650 is rounded off to 124000 [In nearest 1000's]

176430 is rounded off to 176000 [In nearest 1000's]

152120 is rounded off to 152000 [In nearest 1000's]

$$\begin{aligned}\text{Estimated sum} &= 124000 + 176000 + 152000 \\ &= 452000\end{aligned}$$

∴ Rajesh deposited in all three months = ₹ 452000



### Exercise 3E

#### 1. Subtract the following :

|     |  |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|--|----|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|--|---|-----|----|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|--|-----|--|---|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>5</td><td>8</td><td>3</td><td>7</td><td>2</td><td>5</td></tr> <tr><td>-</td><td>2</td><td>4</td><td>2</td><td>5</td><td>1</td></tr> <tr><td>3</td><td>4</td><td>1</td><td>2</td><td>1</td><td>3</td></tr> </table> | L  | TTh | Th | H | T | O | 5 | 8 | 3 | 7 | 2 | 5 | - | 2 | 4 | 2 | 5 | 1 | 3 | 4 | 1 | 2 | 1 | 3 | (b) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>7</td><td>9</td><td>8</td><td>4</td><td>3</td><td></td></tr> <tr><td>-</td><td>5</td><td>6</td><td>4</td><td>2</td><td>1</td></tr> <tr><td>2</td><td>3</td><td>4</td><td>2</td><td>2</td><td></td></tr> </table> | L | TTh | Th | H | T | O | 7 | 9 | 8 | 4 | 3 |  | - | 5 | 6 | 4 | 2 | 1 | 2 | 3 | 4 | 2 | 2 |  | (c) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>4</td><td>7</td><td>8</td><td>7</td><td>8</td><td>5</td></tr> <tr><td>-</td><td>3</td><td>5</td><td>2</td><td>6</td><td>7</td></tr> <tr><td>1</td><td>2</td><td>6</td><td>1</td><td>1</td><td>1</td></tr> </table> | L | TTh | Th | H | T | O | 4 | 7 | 8 | 7 | 8 | 5 | - | 3 | 5 | 2 | 6 | 7 | 1 | 2 | 6 | 1 | 1 | 1 |
| L   | TTh  | Th | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5   | 8  | 3  | 7   | 2  | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 2  | 4  | 2   | 5  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3   | 4  | 1  | 2   | 1  | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L   | TTh  | Th | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7   | 9  | 8  | 4   | 3  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 5  | 6  | 4   | 2  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2   | 3  | 4  | 2   | 2  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L   | TTh  | Th | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4   | 7  | 8  | 7   | 8  | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 3  | 5  | 2   | 6  | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 2  | 6  | 1   | 1  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |    |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |  |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

#### 2. Subtract the following :

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | <table border="1"> <tr><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>0</td></tr> <tr><td>-</td><td>5</td><td>4</td><td>2</td><td>3</td><td>1</td></tr> <tr><td>4</td><td>4</td><td>5</td><td>3</td><td>4</td><td>0</td></tr> </table> | 9 | 8 | 7 | 6 | 5 | 0 | - | 5 | 4 | 2 | 3 | 1 | 4 | 4 | 5 | 3 | 4 | 0 | (b) | <table border="1"> <tr><td>2</td><td>5</td><td>7</td><td>9</td><td>8</td><td>6</td></tr> <tr><td>-</td><td>1</td><td>3</td><td>5</td><td>7</td><td>4</td></tr> <tr><td>1</td><td>2</td><td>2</td><td>2</td><td>4</td><td>1</td></tr> </table> | 2 | 5 | 7 | 9 | 8 | 6 | - | 1 | 3 | 5 | 7 | 4 | 1 | 2 | 2 | 2 | 4 | 1 | (c) | <table border="1"> <tr><td>8</td><td>5</td><td>7</td><td>6</td><td>9</td><td>4</td></tr> <tr><td>-</td><td>5</td><td>3</td><td>2</td><td>4</td><td>8</td></tr> <tr><td>3</td><td>2</td><td>5</td><td>2</td><td>1</td><td>1</td></tr> </table> | 8 | 5 | 7 | 6 | 9 | 4 | - | 5 | 3 | 2 | 4 | 8 | 3 | 2 | 5 | 2 | 1 | 1 |
| 9   | 8   | 7 | 6 | 5 | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 5   | 4 | 2 | 3 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4   | 4   | 5 | 3 | 4 | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2   | 5   | 7 | 9 | 8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 1   | 3 | 5 | 7 | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 2   | 2 | 2 | 4 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8   | 5   | 7 | 6 | 9 | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 5   | 3 | 2 | 4 | 8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3   | 2   | 5 | 2 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

#### 3. Arrange the columns and subtract :

|     |  |     |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|--|-----|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|--|---|-----|-----|--|---|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|--|---|-----|-----|--|---|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | <table border="1"> <tr><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>7</td><td>5</td><td>9</td><td>6</td><td>8</td></tr> <tr><td>-</td><td>3</td><td>2</td><td>8</td><td>5</td></tr> <tr><td>4</td><td>3</td><td>1</td><td>1</td><td>1</td></tr> </table>   | TTh | Th  | H  | T | O | 7 | 5 | 9 | 6 | 8 | - | 3 | 2 | 8 | 5 | 4 | 3 | 1 | 1 | 1 | (b) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>1</td><td>7</td><td>8</td><td>2</td><td>5</td><td>6</td></tr> <tr><td>-</td><td>4</td><td>5</td><td>2</td><td>0</td><td>5</td></tr> <tr><td>1</td><td>3</td><td>3</td><td>0</td><td>5</td><td>1</td></tr> </table> | L | TTh | Th  | H  | T | O   | 1  | 7 | 8 | 2 | 5 | 6 | - | 4 | 5 | 2 | 0 | 5 | 1 | 3 | 3 | 0 | 5 | 1 | (c) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>6</td><td>7</td><td>5</td><td>4</td><td>8</td><td>3</td></tr> <tr><td>-</td><td>5</td><td>1</td><td>2</td><td>0</td><td>3</td></tr> <tr><td>1</td><td>6</td><td>3</td><td>4</td><td>5</td><td>1</td></tr> </table> | L | TTh | Th  | H  | T | O   | 6  | 7 | 5 | 4 | 8 | 3 | - | 5 | 1 | 2 | 0 | 3 | 1 | 6 | 3 | 4 | 5 | 1 |   |   |   |   |
| TTh | Th   | H   | T   | O  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7   | 5  | 9   | 6   | 8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 3  | 2   | 8   | 5  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4   | 3  | 1   | 1   | 1  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L   | TTh  | Th  | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 7  | 8   | 2   | 5  | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 4  | 5   | 2   | 0  | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 3  | 3   | 0   | 5  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L   | TTh  | Th  | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6   | 7  | 5   | 4   | 8  | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 5  | 1   | 2   | 0  | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 6  | 3   | 4   | 5  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| (d) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>4</td><td>5</td><td>3</td><td>7</td><td>8</td><td>2</td></tr> <tr><td>-</td><td>4</td><td>3</td><td>2</td><td>5</td><td>4</td></tr> <tr><td>0</td><td>2</td><td>1</td><td>2</td><td>4</td><td>0</td></tr> </table> | L   | TTh | Th | H | T | O | 4 | 5 | 3 | 7 | 8 | 2 | - | 4 | 3 | 2 | 5 | 4 | 0 | 2 | 1   | 2  | 4 | 0   | (e) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>7</td><td>0</td><td>6</td><td>5</td><td>7</td><td>4</td></tr> <tr><td>-</td><td>6</td><td>0</td><td>3</td><td>4</td><td>2</td></tr> <tr><td>1</td><td>0</td><td>3</td><td>1</td><td>5</td><td>4</td></tr> </table> | L | TTh | Th | H | T | O | 7 | 0 | 6 | 5 | 7 | 4 | - | 6 | 0 | 3 | 4 | 2 | 1 | 0 | 3   | 1  | 5 | 4   | (f) | <table border="1"> <tr><td>L</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td>9</td><td>7</td><td>5</td><td>4</td><td>8</td><td>0</td></tr> <tr><td>-</td><td>8</td><td>3</td><td>5</td><td>2</td><td>4</td></tr> <tr><td>1</td><td>4</td><td>0</td><td>2</td><td>4</td><td>0</td></tr> </table> | L | TTh | Th | H | T | O | 9 | 7 | 5 | 4 | 8 | 0 | - | 8 | 3 | 5 | 2 | 4 | 1 | 4 | 0 | 2 | 4 | 0 |
| L   | TTh  | Th  | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4   | 5  | 3   | 7   | 8  | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 4  | 3   | 2   | 5  | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0   | 2  | 1   | 2   | 4  | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L   | TTh  | Th  | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7   | 0  | 6   | 5   | 7  | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 6  | 0   | 3   | 4  | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 0  | 3   | 1   | 5  | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L   | TTh  | Th  | H   | T  | O |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9   | 7  | 5   | 4   | 8  | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -   | 8  | 3   | 5   | 2  | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1   | 4  | 0   | 2   | 4  | 0 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |  |   |     |     |  |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

#### 4. Find the following:

|     |            |   |           |
|-----|------------|---|-----------|
| (a) | Minuend    | = | 8 9 7 9   |
|     | Subtrahend | = | - 6 7 5 6 |
|     | Difference | = | 2 2 2 3   |

|             |   |             |
|-------------|---|-------------|
| (b) Minuend | = | 7 8 7 8 6   |
| Subtrahend  | = | - 4 5 6 8 5 |
| Difference  | = | 3 3 1 0 1   |

5. Subtract the following :

(a)  $\therefore$  34246 from 465769

|   |   |     |    |   |   |   |
|---|---|-----|----|---|---|---|
|   | L | TTh | Th | H | T | O |
|   | 4 | 6   | 5  | 7 | 6 | 9 |
| - |   | 3   | 4  | 2 | 4 | 6 |
|   | 4 | 3   | 1  | 5 | 2 | 3 |

→ Four lakh thirty one thousand five hundred and twenty three

(b)  $\therefore$  532612 from 876915

|   |   |     |    |   |   |   |
|---|---|-----|----|---|---|---|
|   | L | TTh | Th | H | T | O |
|   | 8 | 7   | 6  | 9 | 1 | 5 |
| - | 5 | 3   | 2  | 6 | 1 | 2 |
|   | 3 | 4   | 4  | 3 | 0 | 3 |

→ Three lakh forty four thousand three hundred and three



**Exercise 3F**

1. Subtract the following :

(a)

|   |   |     |              |              |              |   |
|---|---|-----|--------------|--------------|--------------|---|
|   | L | TTh | Th           | H            | T            | O |
|   |   |     | 5            | 12           | 11           |   |
|   | 7 | 5   | <del>6</del> | <del>3</del> | <del>1</del> |   |
| - | 3 | 4   | 2            | 5            | 6            |   |
|   | 4 | 1   | 3            | 7            | 5            |   |

(b)

|   |              |              |              |              |              |    |
|---|--------------|--------------|--------------|--------------|--------------|----|
|   | L            | TTh          | Th           | H            | T            | O  |
|   |              | 7            | 13           | 6            | 15           | 11 |
|   | <del>8</del> | <del>3</del> | <del>7</del> | <del>6</del> | <del>1</del> |    |
| - | 3            | 4            | 6            | 8            | 5            |    |
|   | 4            | 9            | 0            | 7            | 6            |    |

(c)

|   |   |              |              |              |    |   |
|---|---|--------------|--------------|--------------|----|---|
|   | L | TTh          | Th           | H            | T  | O |
|   |   |              | 4            | 9            | 14 |   |
|   | 3 | <del>5</del> | <del>0</del> | <del>4</del> | 7  |   |
| - | 2 | 4            | 5            | 8            | 3  |   |
|   | 1 | 0            | 4            | 6            | 4  |   |

2. Subtract the following :

(a)

|   |              |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
|   | 3            | 14           | 15           | 11           | 1            | 15           |
|   | <del>4</del> | <del>5</del> | <del>6</del> | <del>1</del> | <del>2</del> | <del>5</del> |
| - | 2            | 8            | 7            | 3            | 0            | 9            |
|   | 1            | 6            | 8            | 8            | 1            | 6            |

(b)

|   |              |              |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|   | 5            | 9            | 9            | 16           | 9            | 9            | 11           |
|   | <del>6</del> | <del>0</del> | <del>0</del> | <del>7</del> | <del>0</del> | <del>0</del> | <del>1</del> |
| - | 8            | 1            | 8            | 2            | 9            | 5            |              |
|   | 5            | 1            | 8            | 8            | 7            | 0            | 6            |

(c)

|   |              |              |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|   | 0            | 16           | 13           | 3            | 9            | 12           | 10           |
|   | <del>1</del> | <del>7</del> | <del>3</del> | <del>4</del> | <del>0</del> | <del>3</del> | <del>0</del> |
| - | 9            | 7            | 3            | 5            | 4            | 6            |              |
|   | 0            | 7            | 6            | 0            | 4            | 8            | 4            |

3. Arrange in columns and subtract :

(a) 

| TTh          | Th           | H            | T            | O            |   |
|--------------|--------------|--------------|--------------|--------------|---|
| 5            | 12           | 7            | 12           | 17           |   |
| <del>6</del> | <del>2</del> | <del>8</del> | <del>3</del> | <del>7</del> |   |
| -            | 3            | 7            | 5            | 9            | 8 |
| <hr/>        |              |              |              |              |   |
| 2            | 5            | 2            | 3            | 9            |   |

(b) 

| L            | TTh          | Th           | H            | T            | O |   |
|--------------|--------------|--------------|--------------|--------------|---|---|
|              | 5            | 11           | 4            | 14           |   |   |
| <del>7</del> | <del>6</del> | <del>1</del> | <del>5</del> | <del>4</del> | 0 |   |
| -            | 7            | 5            | 9            | 3            | 5 | 0 |
| <hr/>        |              |              |              |              |   |   |
| 0            | 0            | 2            | 1            | 9            | 0 |   |

(c) 

| L            | TTh          | Th           | H            | T            | O            |    |
|--------------|--------------|--------------|--------------|--------------|--------------|----|
|              | 7            | 11           | 14           | 10           | 6            | 13 |
| <del>8</del> | <del>2</del> | <del>5</del> | <del>0</del> | <del>7</del> | <del>3</del> |    |
| -            | 6            | 8            | 7            | 2            | 5            | 9  |
| <hr/>        |              |              |              |              |              |    |
| 1            | 3            | 7            | 8            | 1            | 4            |    |

(d) 

| TTh          | Th           | H            | T            | O            |   |
|--------------|--------------|--------------|--------------|--------------|---|
| 3            | 13           | 6            | 9            | 10           |   |
| <del>4</del> | <del>3</del> | <del>7</del> | <del>0</del> | <del>0</del> |   |
| -            | 2            | 9            | 6            | 8            | 1 |
| <hr/>        |              |              |              |              |   |
| 1            | 4            | 0            | 1            | 9            |   |

(e) 

| TTh   | Th           | H            | T            | O            |
|-------|--------------|--------------|--------------|--------------|
|       | 1            | 9            | 14           | 10           |
| 3     | <del>2</del> | <del>0</del> | <del>5</del> | <del>0</del> |
| -     | 1            | 7            | 8            | 5            |
| <hr/> |              |              |              |              |
| 3     | 0            | 2            | 6            | 5            |

(f) 

| L            | TTh          | Th           | H            | T            | O            |    |
|--------------|--------------|--------------|--------------|--------------|--------------|----|
|              | 7            | 9            | 9            | 9            | 9            | 10 |
| <del>8</del> | <del>0</del> | <del>0</del> | <del>0</del> | <del>0</del> | <del>0</del> |    |
| -            | 5            | 4            | 7            | 2            | 7            |    |
| <hr/>        |              |              |              |              |              |    |
| 7            | 4            | 5            | 2            | 7            | 3            |    |

4. Find the following :

(a) Minuend = 

|              | 2            | 16           | 14           | 12           | 12 |
|--------------|--------------|--------------|--------------|--------------|----|
| <del>3</del> | <del>7</del> | <del>5</del> | <del>3</del> | <del>2</del> |    |
| -            | 1            | 8            | 7            | 6            | 7  |
| <hr/>        |              |              |              |              |    |
| 1            | 8            | 7            | 6            | 5            |    |

Subtrahend =

Difference =

(b) Minuend = 

|              | 6            | 16           | 12           | 4            | 10 |
|--------------|--------------|--------------|--------------|--------------|----|
| <del>7</del> | <del>7</del> | <del>2</del> | <del>5</del> | <del>0</del> | 9  |
| -            | 7            | 5            | 3            | 7            | 4  |
| <hr/>        |              |              |              |              |    |
| 6            | 9            | 7            | 1            | 3            | 5  |

Subtrahend =

Difference =

5. Fill the missing digits :

(a) 

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 3     | 7 | 8 | 1 | 5 |   |
| -     | 2 | 3 | 5 | 3 | 4 |
| <hr/> |   |   |   |   |   |
| 1     | 4 | 2 | 8 | 1 |   |

(b) 

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 8     | 2 | 8 | 7 | 9 |   |
| -     | 6 | 4 | 2 | 4 | 5 |
| <hr/> |   |   |   |   |   |
| 1     | 8 | 6 | 3 | 4 |   |

(c) 

|       |   |   |   |   |   |   |
|-------|---|---|---|---|---|---|
| 6     | 2 | 3 | 5 | 2 | 7 |   |
| -     | 4 | 7 | 2 | 8 | 4 | 5 |
| <hr/> |   |   |   |   |   |   |
| 1     | 5 | 0 | 6 | 8 | 2 |   |

6. Fill the missing digits :

(a) 

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 5     | 7 | 8 | 6 | 3 |   |
| -     | 2 | 3 | 5 | 8 | 2 |
| <hr/> |   |   |   |   |   |
| 3     | 4 | 2 | 8 | 1 |   |

(b) 

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 5     | 0 | 0 | 0 | 0 |   |
| -     | 3 | 4 | 6 | 3 | 7 |
| <hr/> |   |   |   |   |   |
| 1     | 5 | 3 | 6 | 3 |   |

(c) 

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 7     | 1 | 7 | 3 | 8 |   |
| -     | 5 | 3 | 8 | 7 | 5 |
| <hr/> |   |   |   |   |   |
| 1     | 7 | 8 | 6 | 3 |   |



### Exercise 3G

- Population of town A = 1,25,347  
Population of town B = 96,458  
More population of town A =  $125347 - 96458$   
= 28889

$$\begin{array}{r} 125347 \\ - 96458 \\ \hline 28889 \end{array}$$

∴ 28889 more population of town A.

- A factory made bulbs in 2021 = 3,17,025  
Next year production decreased = 72,859  
A factory produced bulbs in 2022 =  $317025 - 72859$   
= 244166 bulbs

$$\begin{array}{r} 317025 \\ - 72859 \\ \hline 244166 \end{array}$$

∴ A factory made 2,44,166 bulbs in 2022.

- Vipin had in his account = ₹6,40,000  
Vipin bought a car = ₹4,82,975  
Money left in his account =  $₹6,40,000 - ₹4,82,975$   
= ₹157025

$$\begin{array}{r} 640000 \\ - 482975 \\ \hline 157025 \end{array}$$

∴ Money left ₹157025 in his account.

- Sum of two number = 1,46,328  
One number = 67,493  
Other number =  $1,46,328 - 67,493$   
= 78835

$$\begin{array}{r} 146328 \\ - 67493 \\ \hline 78835 \end{array}$$

∴ The other number is 78835.

- ∴  $102729 - 48523$

$$\begin{array}{r} 102729 \\ - 48523 \\ \hline 54206 \end{array}$$

∴ The number is 54206.

- Difference of two numbers = 63285  
The greater number = 1,32,923  
The smaller number =  $1,32,923 - 63285$   
= 69638

$$\begin{array}{r} 132923 \\ - 63285 \\ \hline 69638 \end{array}$$

∴ The smaller number is 69638.



7.  $\therefore 83425 - 57937$

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|   | 8 | 3 | 4 | 2 | 5 |
| – | 5 | 7 | 9 | 3 | 7 |
|   | 2 | 5 | 4 | 8 | 8 |

$\therefore$  The number is 25488.

8.  $\therefore 127500 - 98600$

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 1     | 2 | 7 | 5 | 0 | 0 |
| –     | 9 | 8 | 6 | 0 | 0 |
| <hr/> |   |   |   |   |   |
| 2     | 8 | 9 | 0 | 0 |   |

$\therefore$  The number is 28900.



### Exercise 3H

1. Estimate the difference by rounding off each of the number to the nearest hundred.

(a)  $523 - 305$

On rounding to the nearest hundreds.

523 is rounded off to 500

305 is rounded off to 300

Estimated difference =  $500 - 300 = 200$

(b)  $1756 - 1365$

On rounding to the nearest hundreds.

1756 is rounded off to 1800

1365 is rounded off to 1400

Estimated difference =  $1800 - 1400$   
= 400

(c)  $8174 - 6326$

On rounding to the nearest hundreds.

8174 is rounded off to 8200

6326 is rounded off to 6300

Estimated difference =  $8200 - 6300 = 1900$

(d)  $36725 - 31678$

On rounding to the nearest hundreds.

36725 is rounded off to 36700

31678 is rounded off to 31700

Estimated difference =  $36700 - 31700 = 5000$

**2. Estimate the difference by rounding off each number to the nearest thousands. Also, find the actual difference.**

(a)  $6578 - 4913$

On rounding off to the nearest thousands.

6578 is rounded off to 7000

4913 is rounded off to 5000

Estimated difference =  $7000 - 5000 = 2000$

Actual difference =  $6578 - 4913 = 1665$

$\therefore$  The estimated difference is close to actual difference.

(b)  $18463 - 13842$

On rounding off to the nearest thousands.

18463 is rounded off to 18000

13842 is rounded off to 14000

Estimated difference =  $18000 - 14000 = 4000$

Actual difference =  $18463 - 13842 = 4621$

$\therefore$  The estimated difference is close to actual difference.

(c)  $73802 - 65789$

On rounding off to the nearest thousands.

73802 is rounded off to 74000

65789 is rounded off to 66000

Estimated difference =  $74000 - 66000 = 8000$

Actual difference =  $73802 - 65789 = 8013$

$\therefore$  The estimated difference is close to actual difference.

(d)  $92437 - 85498$

On rounding off to the nearest thousands.

92437 is rounded off to 92000

85498 is rounded off to 85000

Estimated difference =  $92000 - 85000 = 7000$

Actual difference =  $92437 - 85498 = 6939$

$\therefore$  The estimated difference is close to actual difference.

3. Number of boys in a school = 1367  
 Number of girls in a school = 1235  
 On rounding to the nearest hundreds.  
 1367 is rounded off to 1400  
 1235 is rounded off to 1200  
 Estimated difference =  $1400 - 1200 = 200$   
 $\therefore$  There are 200 more boys than the girls in the school.
4. A bike company sold bikes in a year = 73285  
 Next year it sold bikes = 87372  
 On rounding off to the nearest thousands.  
 73285 is rounded off to 73000  
 87372 is rounded off to 87000  
 Estimated difference =  $87000 - 73000 = 14000$   
 Actual difference =  $87372 - 73285 = 14087$



### Exercise 31

#### 1. Find the following:

(a)  $38 + 29 - 52$

|      |      |
|------|------|
| 38   | 67   |
| + 29 | - 52 |
| 67   | 15   |

$\therefore 38 + 29 - 52 = 15.$

(b)  $75 - 68 + 34$

|      |      |
|------|------|
| 75   | 109  |
| + 34 | - 68 |
| 109  | 41   |

$\therefore 75 - 68 + 34 = 41$

(c)  $600 - 225 - 91$

|       |       |
|-------|-------|
| - 225 | 600   |
| - 91  | - 316 |
| - 316 | 284   |

$\therefore 600 - 225 - 91 = 284$

(d)  $463 + 82 - 299$

|      |       |
|------|-------|
| 463  | 545   |
| + 82 | - 299 |
| 545  | 246   |

$\therefore 463 + 82 - 299 = 246$

(e)  $638 - 280 + 165$

$$\begin{array}{r} 638 \\ + 165 \\ \hline 803 \end{array} \quad \begin{array}{r} 803 \\ - 280 \\ \hline 523 \end{array}$$

$\therefore 638 - 280 + 165 = 523$

(f)  $75 - 68 + 34$

$$\begin{array}{r} -5724 \\ - 782 \\ \hline -6506 \end{array} \quad \begin{array}{r} 7864 \\ - 6506 \\ \hline 1358 \end{array}$$

$\therefore 7864 - 5724 - 782 = 1358$

(g)  $4635 + 7638 - 6713$

$$\begin{array}{r} 4635 \\ + 7638 \\ \hline 12273 \end{array} \quad \begin{array}{r} 12273 \\ - 6713 \\ \hline 5560 \end{array}$$

$\therefore 4635 + 7638 - 6713 = 5560$

(h)  $9342 - 7527 + 1308$

$$\begin{array}{r} 9342 \\ + 1308 \\ \hline 10650 \end{array} \quad \begin{array}{r} 10650 \\ - 7527 \\ \hline 3123 \end{array}$$

$\therefore 9342 - 7527 + 1308 = 3123$

(i)  $75200 - 57384 - 463$

$$\begin{array}{r} -57384 \\ - 463 \\ \hline -57847 \end{array} \quad \begin{array}{r} 75200 \\ - 57847 \\ \hline 17353 \end{array}$$

$\therefore 75200 - 57384 - 463 = 17353$

## 2. Simplify the following:

(a)  $5105 - 25340 + 85236 - 473$

$$\begin{array}{r} 5105 \\ + 85236 \\ \hline 90341 \end{array} \quad \begin{array}{r} -25340 \\ - 473 \\ \hline -25813 \end{array} \quad \begin{array}{r} 90341 \\ - 25813 \\ \hline 64528 \end{array}$$

$\therefore 5105 - 25340 + 85236 - 473 = 64528$

(b)  $21386 - 62405 + 300290 - 216345$

$$\begin{array}{r} 21386 \\ + 300290 \\ \hline 321676 \end{array} \quad \begin{array}{r} -62405 \\ - 216345 \\ \hline -278750 \end{array} \quad \begin{array}{r} 321676 \\ - 278750 \\ \hline 42926 \end{array}$$

$\therefore 21386 - 62405 + 300290 - 216345 = 42926$

3. The sum of the number =  $57946 + 87128$   
=  $145074$

$$\begin{array}{r} 57946 \\ + 87128 \\ \hline 145074 \end{array}$$

The difference of the number =  $87128 - 57946$   
 = 29182

$$\begin{array}{r} 87128 \\ - 57946 \\ \hline 29182 \end{array}$$

Difference of the number =  $145074 - 29182$   
 = 115892

$$\begin{array}{r} 145074 \\ - 29182 \\ \hline 115892 \end{array}$$

4. The sum of two numbers =  $320475$   
 One number =  $- 200756$   
 Other number =  $119719$

$$\begin{array}{r} 320475 \\ - 200756 \\ \hline 119719 \end{array}$$

The difference of the number =  $200756 - 119719$   
 = 81037

$$\begin{array}{r} 200756 \\ - 119719 \\ \hline 081037 \end{array}$$

5. Mr. Dayal wants to buy a car costs = ₹ 8,58,731  
 Mr. Dayal had with him = ₹ 5,31,500  
 Mr. Dayal borrows = ₹ 858731 - ₹ 531500  
 = ₹ 327231

$$\begin{array}{r} 858731 \\ - 531500 \\ \hline 327231 \end{array}$$

Mr. Dayal left with him after buying the car  
 = ₹ 30,000  
 Total borrows = ₹ 327231 + ₹ 30000  
 = ₹ 357231

$$\begin{array}{r} 327231 \\ + 30000 \\ \hline 357231 \end{array}$$

6. Cost of an A.C. = ₹ 78580  
 Cost of a LED = ₹ 38720  
 Cost of a washing machine = ₹ 19340

$$\begin{array}{r} 38720 \\ + 19340 \\ \hline 58060 \end{array}$$

Cost of the both LED and washing machine = ₹ 19340 + ₹ 19340  
 = ₹ 58060

Difference cost of A.C. and cost of the both LED and washing machine  
 = ₹ 78580 - ₹ 58060  
 = ₹ 20520

$$\begin{array}{r} 78580 \\ - 58060 \\ \hline 20520 \end{array}$$

∴ Cost of the A.C. is ₹ 20,520 more than the cost of both LED and washing machine.



Do yourself.

### Apply Your Learning

Problem-solving, Critical and Logical Thinking

$$\begin{array}{rcl} \boxed{70} & + & 20 = 90 \\ \boxed{700} & + & 200 = 900 \\ \boxed{7000} & + & 2000 = 9,000 \end{array}$$

$$\begin{array}{rcl} 50 & + & \boxed{60} = 110 \\ 500 & + & \boxed{600} = 1,100 \\ 5000 & + & \boxed{6000} = 11,000 \end{array}$$

### Think, Solve and Learn

Observation, Problem-solving

The successor of a number = The smallest 5-digit number = 10000

$$\begin{aligned} \therefore \text{Number} &= 10000 - 1 \\ &= 9999 \end{aligned}$$



## 4 Multiplication



### Exercise 4A

#### 1. Fill in the blanks :

- (a)  $8 \times 25 = 25 \times 8$  (b)  $184 \times 236 = 236 \times 184$   
 (c)  $13 \times 73 = 73 \times 13$  (d)  $372 \times 145 = 145 \times 372$

#### 2. Fill in the blanks :

- (a)  $79 \times 1 = 79$  (b)  $87 \times 0 = 0$  (c)  $1 \times 92 = 92$  (d)  $391 \times 0 = 0$

#### 3. Fill in the blanks :

- (a)  $8 \times (5 \times 9) = (8 \times 5) \times 9$  (b)  $(7 \times 9) \times 13 = 7 \times (9 \times 13)$   
 (c)  $(12 \times 7) \times 13 = 12 \times (7 \times 13)$  (d)  $8 \times (11 \times 17) = (8 \times 11) \times 17$

#### 4. Multiply the following :

- (a)  $19 \times 10 = 190$  (b)  $236 \times 10 = 2360$  (c)  $4250 \times 10 = 42500$   
 (d)  $32 \times 100 = 3200$  (e)  $148 \times 100 = 14800$  (f)  $5269 \times 100 = 526900$   
 (g)  $7 \times 1000 = 7000$  (h)  $25 \times 1000 = 25000$  (i)  $257 \times 1000 = 257000$

5. Multiply the following:

- (a)  $28 \times 20 = 560$  (b)  $15 \times 50 = 750$  (c)  $12 \times 60 = 720$   
 (d)  $22 \times 80 = 1760$  (e)  $75 \times 20 = 1500$  (f)  $240 \times 40 = 9600$

6. Multiply the following:

- (a)  $11 \times 700 = 7700$  (b)  $15 \times 300 = 4500$  (c)  $52 \times 400 = 20800$   
 (d)  $110 \times 800 = 88000$  (e)  $111 \times 600 = 66600$  (f)  $116 \times 500 = 58000$

7. Multiply the following:

- (a)  $11 \times 8000 = 88000$  (b)  $15 \times 3000 = 45000$  (c)  $17 \times 7000 = 119000$   
 (d)  $40 \times 6000 = 240000$  (e)  $120 \times 7000 = 840000$  (f)  $204 \times 8000 = 1632000$



## Exercise 4B

1. Multiply the following:

- (a) 
$$\begin{array}{r} 48 \\ \times 24 \\ \hline 192 \\ 960 \\ \hline 1152 \end{array}$$
 (b) 
$$\begin{array}{r} 86 \\ \times 47 \\ \hline 602 \\ 3440 \\ \hline 4042 \end{array}$$
 (c) 
$$\begin{array}{r} 245 \\ \times 53 \\ \hline 735 \\ 12250 \\ \hline 12985 \end{array}$$
 (d) 
$$\begin{array}{r} 849 \\ \times 68 \\ \hline 6792 \\ 50940 \\ \hline 57732 \end{array}$$
 (e) 
$$\begin{array}{r} 2538 \\ \times 35 \\ \hline 12690 \\ 76140 \\ \hline 88830 \end{array}$$

2. Multiply the following:

- (a) 
$$\begin{array}{r} 23 \\ \times 11 \\ \hline 23 \\ 230 \\ \hline 253 \end{array}$$
 (b) 
$$\begin{array}{r} 15 \\ \times 14 \\ \hline 60 \\ 150 \\ \hline 210 \end{array}$$
 (c) 
$$\begin{array}{r} 70 \\ \times 18 \\ \hline 560 \\ 700 \\ \hline 1260 \end{array}$$
 (d) 
$$\begin{array}{r} 42 \\ \times 19 \\ \hline 378 \\ 420 \\ \hline 798 \end{array}$$
 (e) 
$$\begin{array}{r} 89 \\ \times 17 \\ \hline 623 \\ 890 \\ \hline 1513 \end{array}$$

3. (a) 
$$\begin{array}{r} 67 \\ \times 24 \\ \hline 268 \\ 1340 \\ \hline 1608 \end{array}$$
 (b) 
$$\begin{array}{r} 53 \\ \times 35 \\ \hline 265 \\ 1590 \\ \hline 1855 \end{array}$$
 (c) 
$$\begin{array}{r} 86 \\ \times 46 \\ \hline 516 \\ 3440 \\ \hline 3956 \end{array}$$
 (d) 
$$\begin{array}{r} 58 \\ \times 52 \\ \hline 116 \\ 2900 \\ \hline 3016 \end{array}$$
 (e) 
$$\begin{array}{r} 80 \\ \times 94 \\ \hline 320 \\ 7200 \\ \hline 7520 \end{array}$$

4. (a) 
$$\begin{array}{r} 123 \\ \times 11 \\ \hline 123 \\ 1230 \\ \hline 1353 \end{array}$$
 (b) 
$$\begin{array}{r} 231 \\ \times 12 \\ \hline 462 \\ 2310 \\ \hline 2772 \end{array}$$
 (c) 
$$\begin{array}{r} 235 \\ \times 15 \\ \hline 1175 \\ 2350 \\ \hline 3525 \end{array}$$
 (d) 
$$\begin{array}{r} 203 \\ \times 17 \\ \hline 1421 \\ 2030 \\ \hline 3451 \end{array}$$
 (e) 
$$\begin{array}{r} 532 \\ \times 19 \\ \hline 4788 \\ 5320 \\ \hline 10108 \end{array}$$

5. (a) 
$$\begin{array}{r} 324 \\ \times 47 \\ \hline 2268 \\ 12960 \\ \hline 15228 \end{array}$$
 (b) 
$$\begin{array}{r} 345 \\ \times 55 \\ \hline 1725 \\ 17250 \\ \hline 18975 \end{array}$$
 (c) 
$$\begin{array}{r} 654 \\ \times 36 \\ \hline 3924 \\ 19620 \\ \hline 23544 \end{array}$$
 (d) 
$$\begin{array}{r} 740 \\ \times 78 \\ \hline 5920 \\ 51800 \\ \hline 57720 \end{array}$$
 (e) 
$$\begin{array}{r} 555 \\ \times 77 \\ \hline 3885 \\ 38850 \\ \hline 42735 \end{array}$$

6. Multiply the following:

(a) 
$$\begin{array}{r} \text{TThThHTO} \\ 5672 \\ \times 12 \\ \hline 11344 \\ 56720 \\ \hline 68064 \end{array}$$

(b) 
$$\begin{array}{r} \text{TThThHTO} \\ 3063 \\ \times 17 \\ \hline 21441 \\ 30630 \\ \hline 52071 \end{array}$$

(c) 
$$\begin{array}{r} \text{TThThHTO} \\ 4609 \\ \times 15 \\ \hline 23045 \\ 46090 \\ \hline 69135 \end{array}$$

(d) 
$$\begin{array}{r} \text{LTThThHTO} \\ 8796 \\ \times 18 \\ \hline 70368 \\ 87960 \\ \hline 158328 \end{array}$$

7. Multiply the following:

(a) 
$$\begin{array}{r} \text{LTThThHTO} \\ 4360 \\ \times 48 \\ \hline 34880 \\ 174400 \\ \hline 209280 \end{array}$$

(b) 
$$\begin{array}{r} \text{LTThThHTO} \\ 5261 \\ \times 59 \\ \hline 47349 \\ 263050 \\ \hline 310399 \end{array}$$

(c) 
$$\begin{array}{r} \text{LTThThHTO} \\ 6400 \\ \times 75 \\ \hline 32000 \\ 448000 \\ \hline 480000 \end{array}$$

(d) 
$$\begin{array}{r} \text{LTThThHTO} \\ 1423 \\ \times 96 \\ \hline 8538 \\ 128070 \\ \hline 136608 \end{array}$$





## Exercise 4C

1. Multiply the following:

(a) 
$$\begin{array}{r} \text{Th H T O} \\ 34 \\ \times 132 \\ \hline 68 \\ 1020 \\ 3400 \\ \hline 4488 \end{array}$$

(b) 
$$\begin{array}{r} \text{TTh Th H T O} \\ 47 \\ \times 234 \\ \hline 188 \\ 1410 \\ 9400 \\ \hline 10998 \end{array}$$

(c) 
$$\begin{array}{r} \text{TTh Th H T O} \\ 76 \\ \times 360 \\ \hline 00 \\ 4560 \\ 22800 \\ \hline 27360 \end{array}$$

(d) 
$$\begin{array}{r} \text{TTh Th H T O} \\ 80 \\ \times 289 \\ \hline 720 \\ 6400 \\ 16000 \\ \hline 23120 \end{array}$$

2. (a) 
$$\begin{array}{r} \text{TTh Th H T O} \\ 134 \\ \times 420 \\ \hline 000 \\ 2680 \\ 53600 \\ \hline 56280 \end{array}$$

(b) 
$$\begin{array}{r} \text{TTh Th H T O} \\ 265 \\ \times 204 \\ \hline 1060 \\ 0000 \\ 53000 \\ \hline 54060 \end{array}$$

(c) 
$$\begin{array}{r} \text{TTh Th H T O} \\ 436 \\ \times 174 \\ \hline 1744 \\ 30520 \\ 43600 \\ \hline 75864 \end{array}$$

(d) 
$$\begin{array}{r} \text{L TTh Th H T O} \\ 547 \\ \times 760 \\ \hline 000 \\ 32820 \\ 382900 \\ \hline 415720 \end{array}$$

3. (a) 
$$\begin{array}{r} \text{L TTh Th H T O} \\ 1324 \\ \times 234 \\ \hline 5296 \\ 39720 \\ 264800 \\ \hline 309816 \end{array}$$

(b) 
$$\begin{array}{r} \text{L TTh Th H T O} \\ 2257 \\ \times 356 \\ \hline 13542 \\ 112850 \\ 677100 \\ \hline 803492 \end{array}$$

(c) 
$$\begin{array}{r} \text{TL L TTh Th H T O} \\ 4037 \\ \times 513 \\ \hline 12111 \\ 40370 \\ 2018500 \\ \hline 2070981 \end{array}$$

(d) 
$$\begin{array}{r} \text{TL L TTh Th H T O} \\ 1763 \\ \times 650 \\ \hline 0000 \\ 88150 \\ 1057800 \\ \hline 1145950 \end{array}$$

4. Multiply the following:

(a) 
$$\begin{array}{r} \text{L} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 307 \\ \times 402 \\ \hline 614 \\ 0000 \\ 122800 \\ \hline 123414 \end{array}$$

(b) 
$$\begin{array}{r} \text{L} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 2569 \\ \times 237 \\ \hline 17983 \\ 77070 \\ 513800 \\ \hline 608853 \end{array}$$

(c) 
$$\begin{array}{r} \text{L} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 487 \\ \times 320 \\ \hline 000 \\ 9740 \\ 146100 \\ \hline 155840 \end{array}$$

(d) 
$$\begin{array}{r} \text{TL} \text{L} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 2349 \\ \times 450 \\ \hline 0000 \\ 117450 \\ 939600 \\ \hline 1057050 \end{array}$$

5. Find the products:

(a) 
$$\begin{array}{r} \text{H} \text{T} \text{O} \\ 12 \\ \times 9 \\ \hline 108 \end{array} \quad \begin{array}{r} \text{Th} \text{H} \text{T} \text{O} \\ 108 \\ \times 35 \\ \hline 540 \\ 3240 \\ \hline 3780 \end{array}$$
  
 $\therefore 12 \times 9 \times 35 = 3780$

(b) 
$$\begin{array}{r} \text{H} \text{T} \text{O} \\ 15 \\ \times 8 \\ \hline 120 \end{array} \quad \begin{array}{r} \text{Th} \text{H} \text{T} \text{O} \\ 120 \\ \times 43 \\ \hline 360 \\ 4800 \\ \hline 5160 \end{array}$$
  
 $\therefore 15 \times 8 \times 43 = 5160$

(c) 
$$\begin{array}{r} \text{Th} \text{H} \text{T} \text{O} \\ 64 \\ \times 16 \\ \hline 384 \\ 640 \\ \hline 1024 \end{array} \quad \begin{array}{r} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 1024 \\ \times 73 \\ \hline 3072 \\ 71680 \\ \hline 74752 \end{array}$$
  
 $\therefore 64 \times 16 \times 73 = 74752$

(d) 
$$\begin{array}{r} \text{H} \text{T} \text{O} \\ 8 \\ \times 62 \\ \hline 16 \\ 480 \\ \hline 496 \end{array} \quad \begin{array}{r} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 496 \\ \times 150 \\ \hline 000 \\ 24800 \\ 49600 \\ \hline 74400 \end{array}$$
  
 $\therefore 8 \times 62 \times 150 = 74400$

(e) 
$$\begin{array}{r} \text{Th} \text{H} \text{T} \text{O} \\ 59 \\ \times 13 \\ \hline 177 \\ 590 \\ \hline 767 \end{array} \quad \begin{array}{r} \text{L} \text{Th} \text{Th} \text{H} \text{T} \text{O} \\ 767 \\ \times 241 \\ \hline 767 \\ 30680 \\ 153400 \\ \hline 184847 \end{array}$$
  
 $\therefore 59 \times 13 \times 241 = 184847$



## Exercise 4D

### 1. Simplify the following:

$$\begin{array}{llll} \text{(a)} & 8 \times 5 + 6 \times 7 & \text{(b)} & 7 \times 4 + 3 \times 9 \\ & = 40 + 42 & & = 28 + 27 \\ & = 82 & & = 55 \end{array} \quad \begin{array}{llll} \text{(c)} & 11 \times 8 + 15 \times 6 & \text{(d)} & 18 \times 4 + 14 \times 2 \\ & = 88 + 90 & & = 72 + 28 \\ & = 178 & & = 100 \end{array}$$

$$\begin{array}{llll} \text{2. (a)} & 9 \times 8 - 6 \times 5 & \text{(b)} & 15 \times 10 - 9 \times 11 \\ & = 72 - 30 & & = 150 - 99 \\ & = 42 & & = 51 \end{array} \quad \begin{array}{llll} \text{(c)} & 16 \times 7 - 14 \times 8 & \text{(d)} & 30 \times 7 - 16 \times 3 \\ & = 112 - 112 & & = 210 - 48 \\ & = 0 & & = 162 \end{array}$$

$$\begin{array}{ll} \text{3. (a)} & 16 \times 10 + 15 \times 3 - 9 \times 11 \\ & = 160 + 45 - 99 \\ & = 205 - 99 \\ & = 106 \end{array} \quad \begin{array}{ll} \text{(b)} & 18 \times 5 + 15 \times 6 - 17 \times 10 \\ & = 90 + 90 - 170 \\ & = 180 - 170 \\ & = 10 \end{array}$$

$$\begin{array}{ll} \text{(c)} & 12 \times 11 + 24 \times 8 - 2 \times 110 \\ & = 132 + 192 - 220 \\ & = 324 - 220 \\ & = 104 \end{array} \quad \begin{array}{ll} \text{(d)} & 12 \times 7 - 14 \times 8 + 13 \times 6 \\ & = 84 - 112 + 78 \\ & = 162 - 112 \\ & = 50 \end{array}$$

$$\begin{array}{ll} \text{4. (a)} & 15 \times 8 - 9 \times 7 + 12 \times 5 \\ & = 120 - 63 + 60 \\ & = 180 - 63 \\ & = 117 \end{array} \quad \begin{array}{ll} \text{(b)} & 102 \times 6 - 28 \times 8 + 14 \times 7 \\ & = 612 - 224 + 98 \\ & = 710 - 224 \\ & = 486 \end{array}$$

$$\begin{array}{ll} \text{(c)} & 304 \times 20 - 130 \times 8 + 7 \times 100 \\ & = 6080 - 1040 + 700 \\ & = 6780 - 1040 \\ & = 5740 \end{array} \quad \begin{array}{ll} \text{(d)} & 123 \times 4 - 34 \times 5 + 45 \times 6 \\ & = 492 - 170 + 270 \\ & = 762 - 170 \\ & = 592 \end{array}$$

$$\begin{array}{ll} \text{5. (a)} & 14 \times 8 - 7 \times 8 - 4 \times 12 \\ & = 112 - 56 - 48 \\ & = 112 - 104 \\ & = 8 \end{array} \quad \begin{array}{ll} \text{(b)} & 123 \times 8 - 25 \times 9 - 50 \times 3 \\ & = 984 - 225 - 150 \\ & = 984 - 375 \\ & = 609 \end{array}$$

$$\begin{array}{ll} \text{(c)} & 305 \times 4 - 30 \times 3 - 5 \times 4 \\ & = 1220 - 90 - 20 \\ & = 1220 - 110 \\ & = 1110 \end{array} \quad \begin{array}{ll} \text{(d)} & 407 \times 7 - 45 \times 8 - 55 \times 4 \\ & = 2849 - 360 - 220 \\ & = 2849 - 580 \\ & = 2269 \end{array}$$

6. (a)  $9 \times 8 - 10 \times 7 + 11 \times 4 - 6 \times 5$   
 $= 72 - 70 + 44 - 30$   
 $= 116 - 100$   
 $= 16$
- (b)  $115 \times 4 - 25 \times 8 - 12 \times 5 + 3 \times 200$   
 $= 460 - 200 - 60 + 600$   
 $= 1060 - 260$   
 $= 800$
- (c)  $18 \times 5 - 67 \times 2 + 134 \times 3 - 2 \times 105$   
 $= 90 - 134 + 402 - 210$   
 $= 492 - 344$   
 $= 148$
- (d)  $16 \times 30 - 8 \times 12 - 18 \times 50 + 25 \times 86$   
 $= 480 - 96 - 900 + 2150$   
 $= 2630 - 996$   
 $= 1634$



### Exercise 4E

1. Tick (✓) the best estimate from the given estimations:

- (a)  $4 \times 72 = 290$  ☒ 280 ☐ 300 ☐
- (b)  $57 \times 83 = 5600$  ☐ 4800 ☒ 6000 ☐
- (c)  $18 \times 96 = 1800$  ☒ 2000 ☐ 1900 ☐
- (d)  $143 \times 61 = 8400$  ☐ 6000 ☐ 8500 ☒

Estimate each of the following products:

2. By rounding off each number to the nearest-tens.

- (a) 
$$\begin{array}{r} 64 \\ \times 43 \\ \hline 192 \\ 2560 \\ \hline 2752 \end{array}$$
  $\rightarrow$  Actual Product
- $$\begin{array}{r} 60 \\ \times 40 \\ \hline 2400 \end{array}$$
  $\rightarrow$  Estimated Product
- (Rounded down to the nearest ten)  
(Rounded down to the nearest ten)

- (b) 
$$\begin{array}{r} 57 \\ \times 13 \\ \hline 171 \\ 570 \\ \hline 741 \end{array}$$
  $\rightarrow$  Actual Product
- $$\begin{array}{r} 60 \\ \times 10 \\ \hline 600 \end{array}$$
  $\rightarrow$  Estimated Product
- (Rounded up to the nearest ten)  
(Rounded down to the nearest ten)

- (c) 
$$\begin{array}{r} 49 \\ \times 32 \\ \hline 98 \\ 1470 \\ \hline 1568 \end{array}$$
  $\rightarrow$  Actual Product
- $$\begin{array}{r} 50 \\ \times 30 \\ \hline 1500 \end{array}$$
  $\rightarrow$  Estimated Product
- (Rounded up to the nearest ten)  
(Rounded down to the nearest ten)

(d)

|       |   |       |                                   |
|-------|---|-------|-----------------------------------|
| 218   | → | 220   | (Rounded up to the nearest ten)   |
| × 52  | → | × 50  | (Rounded down to the nearest ten) |
| 436   |   | 11000 | → Estimated Product               |
| 10900 |   |       |                                   |
| 11336 | → |       | Actual Product                    |

3. By rounding off each number to the nearest-hundred.

(a)

|        |   |        |                                       |
|--------|---|--------|---------------------------------------|
| 623    | → | 600    | (Rounded down to the nearest hundred) |
| × 718  | → | × 700  | (Rounded down to the nearest hundred) |
| 4984   |   | 420000 | → Estimated Product                   |
| 6230   |   |        |                                       |
| 436100 |   |        |                                       |
| 447314 | → |        | Actual Product                        |

(b)

|       |   |       |                                     |
|-------|---|-------|-------------------------------------|
| 578   | → | 600   | (Rounded up to the nearest hundred) |
| × 82  | → | × 100 | (Rounded up to the nearest hundred) |
| 1156  |   | 60000 | → Estimated Product                 |
| 46240 |   |       |                                     |
| 47396 | → |       | Actual Product                      |

(c)

|       |   |       |                                       |
|-------|---|-------|---------------------------------------|
| 235   | → | 200   | (Rounded down to the nearest hundred) |
| × 215 | → | × 200 | (Rounded down to the nearest hundred) |
| 1175  |   | 40000 | → Estimated Product                   |
| 2350  |   |       |                                       |
| 47000 |   |       |                                       |
| 50525 | → |       | Actual Product                        |

(d)

|        |   |        |                                       |
|--------|---|--------|---------------------------------------|
| 534    | → | 500    | (Rounded down to the nearest hundred) |
| × 856  | → | × 900  | (Rounded up to the nearest hundred)   |
| 3204   |   | 450000 | → Estimated Product                   |
| 26700  |   |        |                                       |
| 427200 |   |        |                                       |
| 457104 | → |        | Actual Product                        |



**Exercise 4F**

1. Cost of 1 transistor = ₹ 968
- Cost of 156 transistors = ₹ 968 × 156
- = ₹ 1,51,008
- ∴ The total cost of 156 transistors = ₹ 1,51,008.

|        |
|--------|
| 968    |
| × 156  |
| 5808   |
| 48400  |
| 96800  |
| 151008 |

2. Number of tennis balls in a carton = 538  
 Number of cartons = 172  
 Total number of tennis ball =  $538 \times 172$   
 = 92536  
 $\therefore$  There are 92532 tennis balls in 172 cartons.

$$\begin{array}{r} 538 \\ \times 172 \\ \hline 1076 \\ 37660 \\ 53800 \\ \hline 92536 \end{array}$$

3. A TV set cost = ₹ 8256  
 225 TV sets cost =  $₹ 8256 \times 225$   
 = ₹ 18,57,600  
 $\therefore$  225 TV sets cost = ₹ 18,57,600

$$\begin{array}{r} 8256 \\ \times 225 \\ \hline 41280 \\ 165120 \\ 1651200 \\ \hline 1857600 \end{array}$$

4. The monthly fee of a student = ₹ 1635  
 Number of students in a school = 854  
 Total amount of fee deposited =  $₹ 1635 \times 854$   
 = ₹ 13,96,290  
 $\therefore$  ₹ 13,96,290 fee collected in a school.

$$\begin{array}{r} 1635 \\ \times 854 \\ \hline 6540 \\ 81750 \\ 1308000 \\ \hline 1396290 \end{array}$$

5. A box holds pens = 5 dozen  
 $\therefore$  1 dozen = 12  
 $\therefore$  5 dozen =  $12 \times 5 = 60$   
 Number of boxes = 250  
 Total number of pens =  $250 \times 60$   
 = 15000  
 $\therefore$  There are 15000 pens in 250 boxes.

$$\begin{array}{r} 250 \\ \times 60 \\ \hline 000 \\ 15000 \\ \hline 15000 \end{array}$$

6. 1 week = 7 days  
 1 day = 24 hours  
 1 hour = 60 minutes  
 Total minutes in a week =  $7 \times 24 \times 60$   
 = 10080  
 $\therefore$  There are 10080 minutes in a week.

$$\begin{array}{r} 24 \\ \times 7 \\ \hline 168 \end{array}$$

$$\begin{array}{r} 168 \\ \times 60 \\ \hline 000 \\ 10080 \\ \hline 10080 \end{array}$$

$$\begin{aligned}
 7. \quad \text{The month of May} &= 31 \text{ days} \\
 1 \text{ day} &= 24 \text{ hours} \\
 \text{Total hours month of May} &= 31 \times 24 \text{ hours} \\
 &= 744 \text{ hours}
 \end{aligned}$$

$$\begin{array}{r}
 31 \\
 \times 24 \\
 \hline
 124 \\
 620 \\
 \hline
 744
 \end{array}$$

$\therefore$  There are 744 hours in the month of May.

$$\begin{aligned}
 8. \quad \text{Number of sections in each class} &= 4 \\
 \text{Number of students in each section} &= 45 \\
 \therefore \text{Classes} &= 1 \text{ to } 10
 \end{aligned}$$

$$\begin{array}{r}
 45 \\
 \times 40 \\
 \hline
 00 \\
 1800 \\
 \hline
 1800
 \end{array}$$

$$\text{Total sections in each class} = 4 \times 10 = 40$$

$$\begin{aligned}
 \text{Total number of students} &= 40 \times 45 \\
 &= 1800 \text{ students}
 \end{aligned}$$

$\therefore$  The total number of students is 1800 in classes 1 to 10.



### Maths in Everyday Life

Observation, Curiosity

Do yourself.

### Apply Your Learning

Values, Problem-solving, Applicative Thinking

$$\begin{aligned}
 \text{(i) Cost of a juice} &= ₹ 22 \\
 \text{Cost of a chocolate bar} &= ₹ 25 \\
 \text{Cost of a geometry box} &= ₹ 135 \\
 \text{Total money spend on each child} &= ₹ 22 + ₹ 25 + ₹ 135 \\
 &= ₹ 182 \\
 \text{Number of children in a school} &= 465 \\
 \text{Money spend on each child} &= ₹ 182 \\
 \text{Total money spend in a school} &= 465 \times ₹ 182 \\
 &= ₹ 846430
 \end{aligned}$$

$$\begin{array}{r}
 465 \\
 \times 182 \\
 \hline
 930 \\
 37200 \\
 46500 \\
 \hline
 84630
 \end{array}$$

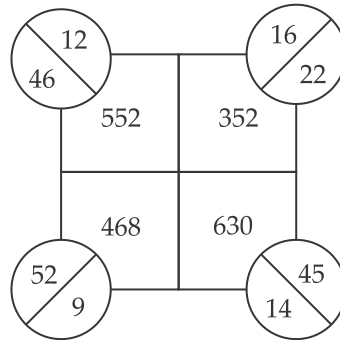
$$\begin{aligned}
 \text{(ii) Number of children in a school} &= 465 \\
 \text{Each child donates} &= ₹ 250 \\
 \text{Total money donates to a child care home} &= 465 \times ₹ 250 \\
 &= ₹ 116250
 \end{aligned}$$

$$\begin{array}{r}
 465 \\
 \times 250 \\
 \hline
 000 \\
 23250 \\
 93000 \\
 \hline
 116250
 \end{array}$$

**Think, Solve and Learn**

Critical and logical thinking, Problem-solving

Study the diagram given alongside and find the missing term.



## Division

**Exercise 5A****1. Fill in the blanks :**

(a)  $32 \div 1 = 32$

(b)  $154 \div 1 = 154$

(c)  $47 \div 1 = 47$

(d)  $230 \div 1 = 230$

**2. Fill in the blanks :**

(a)  $56 \div 56 = 1$

(b)  $39 \div 39 = 1$

(c)  $0 \div 67 = 0$

(d)  $0 \div 40 = 0$

**3. Fill in the blanks :**

(a)  $64 \div 4 = 16$

(b)  $565 \div 5 = 113$

(c)  $639 \div 9 = 71$

(d)  $712 \div 8 = 89$



4. Divide and write the quotient (Q) and the remainder (R) :

$$\begin{array}{r} 172 \\ 2 \overline{) 345} \\ \underline{- 2} \phantom{0} \\ 14 \\ \underline{- 14} \phantom{0} \\ 05 \\ \underline{- 4} \phantom{0} \\ 1 \end{array} \quad \begin{array}{l} Q = 172 \\ R = 1 \end{array}$$

$$\begin{array}{r} 418 \\ 3 \overline{) 1256} \\ \underline{- 12} \phantom{0} \\ 05 \\ \underline{- 3} \phantom{0} \\ 26 \\ \underline{- 24} \phantom{0} \\ 2 \end{array} \quad \begin{array}{l} Q = 418 \\ R = 2 \end{array}$$

$$\begin{array}{r} 774 \\ 5 \overline{) 3872} \\ \underline{- 35} \phantom{0} \\ 37 \\ \underline{- 35} \phantom{0} \\ 22 \\ \underline{- 20} \phantom{0} \\ 2 \end{array} \quad \begin{array}{l} Q = 774 \\ R = 2 \end{array}$$

$$\begin{array}{r} 608 \\ 8 \overline{) 4864} \\ \underline{- 48} \phantom{0} \\ 64 \\ \underline{- 64} \phantom{0} \\ 0 \end{array} \quad \begin{array}{l} Q = 608 \\ R = 0 \end{array}$$

5. Divide the following :

$$\begin{array}{r} 2363 \\ 2 \overline{) 4726} \\ \underline{- 4} \phantom{0} \\ 07 \\ \underline{- 6} \phantom{0} \\ 12 \\ \underline{- 12} \phantom{0} \\ 06 \\ \underline{- 6} \phantom{0} \\ 0 \end{array} \quad \begin{array}{l} Q = 2363 \\ R = 0 \end{array}$$

$$\begin{array}{r} 955 \\ 6 \overline{) 5735} \\ \underline{- 54} \phantom{0} \\ 033 \\ \underline{- 30} \phantom{0} \\ 035 \\ \underline{- 30} \phantom{0} \\ 05 \end{array} \quad \begin{array}{l} Q = 955 \\ R = 5 \end{array}$$

$$\begin{array}{r} 1159 \\ 8 \overline{) 9274} \\ \underline{- 8} \phantom{0} \\ 12 \\ \underline{- 8} \phantom{0} \\ 47 \\ \underline{- 40} \phantom{0} \\ 74 \\ \underline{- 72} \phantom{0} \\ 2 \end{array} \quad \begin{array}{l} Q = 1159 \\ R = 2 \end{array}$$

$$\begin{array}{r} 1097 \\ 9 \overline{) 9879} \\ \underline{- 9} \phantom{0} \\ 087 \\ \underline{- 81} \phantom{0} \\ 069 \\ \underline{- 63} \phantom{0} \\ 06 \end{array} \quad \begin{array}{l} Q = 1097 \\ R = 6 \end{array}$$

6. Divide the following :

$$\begin{array}{r} 40 \\ 12 \overline{) 485} \\ \underline{- 48} \phantom{0} \\ 05 \end{array} \quad \begin{array}{l} Q = 40 \\ R = 5 \end{array}$$

$$\begin{array}{r} 31 \\ 23 \overline{) 732} \\ \underline{- 69} \phantom{0} \\ 42 \\ \underline{- 23} \\ 19 \end{array} \quad \begin{array}{l} Q = 31 \\ R = 19 \end{array}$$

$$\begin{array}{r} 207 \\ 35 \overline{) 7250} \\ \underline{- 70} \phantom{0} \\ 0250 \\ \underline{- 245} \\ 05 \end{array} \quad \begin{array}{l} Q = 207 \\ R = 5 \end{array}$$

$$\begin{array}{r} 235 \\ 28 \overline{) 6586} \\ \underline{- 56} \phantom{0} \\ 098 \\ \underline{- 84} \\ 146 \\ \underline{- 140} \\ 06 \end{array} \quad \begin{array}{l} Q = 235 \\ R = 6 \end{array}$$

Divide the following :

$$\begin{array}{r} 90 \\ 11 \overline{) 999} \\ \underline{- 99} \phantom{0} \\ 09 \end{array} \quad \begin{array}{l} Q = 90 \\ R = 9 \end{array}$$

$$\begin{array}{r} 56 \\ 16 \overline{) 896} \\ \underline{- 80} \phantom{0} \\ 96 \\ \underline{- 96} \\ 0 \end{array} \quad \begin{array}{l} Q = 56 \\ R = 0 \end{array}$$

$$\begin{array}{r} 20 \\ 15 \overline{) 305} \\ \underline{- 30} \phantom{0} \\ 05 \end{array} \quad \begin{array}{l} Q = 20 \\ R = 5 \end{array}$$

$$\begin{array}{r} 22 \\ 35 \overline{) 785} \\ \underline{- 70} \phantom{0} \\ 85 \\ \underline{- 70} \\ 15 \end{array} \quad \begin{array}{l} Q = 22 \\ R = 15 \end{array}$$

$$\begin{array}{r} 695 \\ 19 \overline{) 13220} \\ \underline{- 114} \phantom{0} \\ 182 \\ \underline{- 171} \\ 110 \\ \underline{- 95} \\ 15 \end{array} \quad \begin{array}{l} Q = 695 \\ R = 15 \end{array}$$

$$\begin{array}{r} 5653 \\ 25 \overline{) 141340} \\ \underline{- 125} \phantom{0} \\ 163 \\ \underline{- 150} \\ 134 \\ \underline{- 125} \\ 90 \\ \underline{- 75} \\ 15 \end{array} \quad \begin{array}{l} Q = 5653 \\ R = 15 \end{array}$$

$$\begin{array}{r}
 14886 \\
 (c) \ 43 \overline{) 640137} \\
 \underline{- 43} \phantom{00} \\
 210 \phantom{00} \\
 \underline{- 172} \phantom{00} \\
 381 \phantom{00} \\
 \underline{- 344} \phantom{00} \\
 373 \phantom{00} \\
 \underline{- 344} \phantom{00} \\
 297 \phantom{00} \\
 \underline{- 258} \phantom{00} \\
 39
 \end{array}$$

$$\begin{array}{l}
 Q = 14886 \\
 R = 39
 \end{array}$$

$$\begin{array}{r}
 4000 \\
 (d) \ 51 \overline{) 204037} \\
 \underline{- 204} \phantom{00} \\
 0037
 \end{array}$$

$$\begin{array}{l}
 Q = 4000 \\
 R = 37
 \end{array}$$



### Exercise 5B

1. Write the quotient (Q) and the remainder (R):

$$(a) \ 72 \div 10 \quad | \ Q = 7 \quad | \ R = 2 \quad (b) \ 96 \div 10 \quad | \ Q = 9 \quad | \ R = 6$$

$$(c) \ 187 \div 10 \quad | \ Q = 18 \quad | \ R = 7 \quad (d) \ 450 \div 10 \quad | \ Q = 45 \quad | \ R = 0$$

2. Write the quotient (Q) and the remainder (R) for the followings:

$$(a) \ 324 \div 100 \quad | \ Q = 3 \quad | \ R = 24 \quad (b) \ 85 \div 100 \quad | \ Q = 0 \quad | \ R = 85$$

$$(c) \ 870 \div 100 \quad | \ Q = 8 \quad | \ R = 70 \quad (d) \ 2314 \div 100 \quad | \ Q = 23 \quad | \ R = 14$$

3. Write the quotient (Q) and the remainder (R) for the given divisions:

$$(a) \ 512 \div 1000 \quad | \ Q = 0 \quad | \ R = 512 \quad (b) \ 3719 \div 1000 \quad | \ Q = 3 \quad | \ R = 719$$

$$(c) \ 7500 \div 1000 \quad | \ Q = 7 \quad | \ R = 500 \quad (d) \ 65000 \div 1000 \quad | \ Q = 65 \quad | \ R = 0$$

4. Fill in the blanks:

$$(a) \ 60 \div 10 = \boxed{6} \quad (b) \ 120 \div 30 = \boxed{4}$$

$$(c) \ 560 \div 40 = \boxed{14} \quad (d) \ 2000 \div 50 = \boxed{40}$$

5. Fill in the blanks:

$$(a) \ 1400 \div 200 = \boxed{7} \quad (b) \ 27000 \div 300 = \boxed{90}$$

$$(c) \ 45900 \div 90 = \boxed{510} \quad (d) \ 25000 \div 500 = \boxed{50}$$

6. Divide the following:

$$\begin{array}{r} 69 \\ 50 \overline{) 3450} \\ \underline{- 300} \\ 0450 \\ \underline{- 450} \\ 0 \end{array} \quad \begin{array}{l} Q = 69 \\ R = 0 \end{array}$$

$$\begin{array}{r} 94 \\ 80 \overline{) 7586} \\ \underline{- 720} \\ 386 \\ \underline{- 320} \\ 66 \end{array} \quad \begin{array}{l} Q = 94 \\ R = 66 \end{array}$$

$$\begin{array}{r} 54 \\ 250 \overline{) 13725} \\ \underline{- 1250} \\ 1225 \\ \underline{- 1000} \\ 225 \end{array} \quad \begin{array}{l} Q = 54 \\ R = 225 \end{array}$$

$$\begin{array}{r} 246 \\ 300 \overline{) 73854} \\ \underline{- 600} \\ 1385 \\ \underline{- 1200} \\ 1854 \\ \underline{- 1800} \\ 54 \end{array} \quad \begin{array}{l} Q = 246 \\ R = 54 \end{array}$$

7. Divide the following:

$$\begin{array}{r} 8 \\ 111 \overline{) 888} \\ \underline{- 888} \\ 0 \end{array} \quad \begin{array}{l} Q = 8 \\ R = 0 \end{array}$$

$$\begin{array}{r} 4 \\ 145 \overline{) 580} \\ \underline{- 580} \\ 0 \end{array} \quad \begin{array}{l} Q = 4 \\ R = 0 \end{array}$$

$$\begin{array}{r} 8 \\ 101 \overline{) 808} \\ \underline{- 808} \\ 0 \end{array} \quad \begin{array}{l} Q = 8 \\ R = 0 \end{array}$$

$$\begin{array}{r} 3 \\ 420 \overline{) 1260} \\ \underline{- 1260} \\ 0 \end{array} \quad \begin{array}{l} Q = 3 \\ R = 0 \end{array}$$

8. Divide the following:

$$\begin{array}{r} 15 \\ 122 \overline{) 1835} \\ \underline{- 122} \\ 0615 \\ \underline{- 610} \\ 5 \end{array} \quad \begin{array}{l} Q = 15 \\ R = 5 \end{array}$$

$$\begin{array}{r} 26 \\ 185 \overline{) 4972} \\ \underline{- 370} \\ 1272 \\ \underline{- 1122} \\ 150 \end{array} \quad \begin{array}{l} Q = 26 \\ R = 150 \end{array}$$

$$\begin{array}{r}
 \phantom{0}1\phantom{0}1\phantom{0}2 \\
 346 \overline{) 38798} \\
 \underline{- 346} \phantom{0} \\
 419 \phantom{0} \\
 \underline{- 346} \phantom{0} \\
 738 \\
 \underline{- 692} \\
 46
 \end{array}$$

$$\begin{aligned}
 Q &= 112 \\
 R &= 46
 \end{aligned}$$

$$\begin{array}{r}
 \phantom{0}1\phantom{0}8 \\
 421 \overline{) 7844} \\
 \underline{- 421} \phantom{0} \\
 3634 \\
 \underline{- 3368} \\
 266
 \end{array}$$

$$\begin{aligned}
 Q &= 18 \\
 R &= 266
 \end{aligned}$$



### Exercise 5C

- Number of photographs in an album = 492  
Number of photographs on each page = 12  
Number of fill pages in an album =  $492 \div 12$   
 $= 41$

So, Amit filled 41 pages in an album.

- Total weight of rice = 3900 kg  
Weight of each bag holds of rice = 60 kg  
The least number of bags =  $3900 \div 60$   
 $= 65$

So, the least number of bags is 65.

- Number of newspapers = 5000  
Boys deliver of newspapers = 90  
Each boy deliver of newspapers =  $5000 \div 90$   
So, 55 newspapers deliver of each boys and  
50 newspapers are left.

- A factory produced lunch boxes in a period of 45 days = 5625  
A factory produced lunch boxes in daily =  $5625 \div 45$   
 $= 125$

So, 125 lunch boxes produced daily in the factory.

$$\begin{array}{r}
 \phantom{0}4\phantom{0}1 \\
 12 \overline{) 492} \\
 \underline{- 48} \phantom{0} \\
 12 \\
 \underline{- 12} \\
 0
 \end{array}$$

$$\begin{array}{r}
 \phantom{0}6\phantom{0}5 \\
 60 \overline{) 3900} \\
 \underline{- 360} \phantom{0} \\
 300 \\
 \underline{- 300} \\
 0
 \end{array}$$

$$\begin{array}{r}
 \phantom{0}5\phantom{0}5 \\
 90 \overline{) 5000} \\
 \underline{- 450} \phantom{0} \\
 500 \\
 \underline{- 450} \\
 50
 \end{array}$$

$$\begin{array}{r}
 \phantom{0}1\phantom{0}2\phantom{0}5 \\
 45 \overline{) 5625} \\
 \underline{- 45} \phantom{0} \\
 112 \\
 \underline{- 90} \\
 225 \\
 \underline{- 225} \\
 0
 \end{array}$$

5. Number of mango trees = 10263

Number of rows = 72

Number of trees in each row =  $10263 \div 72$

So, 142 trees in each row and 39 trees are left at the end.

$$\begin{array}{r} 142 \\ 72 \overline{) 10263} \\ \underline{- 72} \phantom{00} \\ 306 \\ \underline{- 288} \phantom{00} \\ 183 \\ \underline{- 144} \phantom{00} \\ 39 \end{array}$$

6. Total enrolment number of students = 2016

Number of students sit in a bus = 36

Total number of buses =  $2016 \div 36$

So, the least number of buses is 56 to bring all the students for a school picnic.

$$\begin{array}{r} 56 \\ 36 \overline{) 2016} \\ \underline{- 180} \phantom{00} \\ 216 \\ \underline{- 216} \phantom{00} \\ 0 \end{array}$$



### Exercise 5D

1. Estimate the quotient by rounding off to the nearest tens :

- (a)  $46 \div 14$

$46 \div 14$  is rounded off to  $50 \div 10$

$$\therefore 50 \div 10 = 5$$

So, the estimated quotient is 5.

- (b)  $76 \div 24$

$76 \div 24$  is rounded off to  $80 \div 20$

$$\therefore 80 \div 20 = 4$$

So, the estimated quotient is 4.

- (c)  $153 \div 28$

$153 \div 28$  is rounded off to  $150 \div 30$

$$\therefore 150 \div 30 = 5$$

So, the estimated quotient is 5.

- (d)  $481 \div 244$

$481 \div 244$  is rounded off to  $480 \div 240$

$$\therefore 480 \div 240 = 2$$

So, the estimated quotient is 2.

(e)  $745 \div 245$

$745 \div 245$  is rounded off to  $750 \div 250$

$$\therefore 750 \div 250 = 3$$

So, the estimated quotient is 3.

(f)  $7403 \div 98$

$7403 \div 98$  is rounded off to  $7400 \div 100$

$$\therefore 7400 \div 100 = 74$$

So, the estimated quotient is 74.

(g)  $1015 \div 15$

$1015 \div 15$  is rounded off to  $1020 \div 20$

$$\therefore 1020 \div 20 = 51$$

So, the estimated quotient is 51.

(h)  $8123 \div 74$

$8123 \div 74$  is rounded off to  $8120 \div 70$

$$\therefore 8120 \div 70 = 116$$

So, the estimated quotient is 116.

**2. Estimate the quotient by rounding off to the nearest hundred :**

(a)  $2358 \div 249$

$2358 \div 249$  is rounded off to  $2400 \div 200$

$$\therefore 2400 \div 200 = 12$$

So, the estimated quotient is 12.

(b)  $7538 \div 256$

$7538 \div 256$  is rounded off to  $7500 \div 300$

$$\therefore 7500 \div 300 = 25$$

So, the estimated quotient is 25.

(c)  $14585 \div 183$

$14585 \div 183$  is rounded off to  $14600 \div 200$

$$\therefore 14600 \div 200 = 73$$

So, the estimated quotient is 73.

- (d)  $5683 \div 1885$   
 $5683 \div 1885$  is rounded off to  $5700 \div 1900$   
 $\therefore 5700 \div 1900 = 3$   
 So, the estimated quotient is 3.
- (e)  $2375 \div 275$   
 $2375 \div 275$  is rounded off to  $2400 \div 3000$   
 $\therefore 2400 \div 300 = 8$   
 So, the estimated quotient is 8.
- (f)  $27861 \div 333$   
 $27861 \div 333$  is rounded off to  $27900 \div 300$   
 $\therefore 27900 \div 300 = 93$   
 So, the estimated quotient is 93.



### Maths Fun

Problem-solving, Observation

| Letter (Code)    | O                    | R                   | A                   | N                    | G                   | E                   |
|------------------|----------------------|---------------------|---------------------|----------------------|---------------------|---------------------|
| Quotient         | 37                   | 17                  | 79                  | 19                   | 24                  | 38                  |
| Division Problem | $24 \overline{)888}$ | $8 \overline{)136}$ | $3 \overline{)237}$ | $13 \overline{)247}$ | $8 \overline{)192}$ | $6 \overline{)228}$ |

| Quotient      | 25 | 38 | 39 | 87 | 79 | 48 | 17 | 19 | 37 | 18 | 49 | 24 |
|---------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Letter (Code) | I  | E  | U  | Z  | A  | S  | R  | N  | O  | L  | V  | G  |

### Apply Your Learning

Problem-solving, Critical and Logical thinking

Fill in the empty boxes.

$$\begin{array}{r}
 6 \boxed{3} \\
 1 \boxed{2} \overline{) 765} \\
 \underline{-72} \downarrow \\
 \boxed{4} \boxed{5} \\
 \underline{-36} \\
 09
 \end{array}$$

### Think, Solve and Learn

Integrate with General Awareness, Cultural Awareness, Observation, Problem-solving

Do yourself.





## Multiples and Factors



### Exercise 6A

1. Complete the set of multiples of :

- (a) 4 : 4 8 12 16 20 24 28 32 36 40  
(b) 5 : 5 10 15 20 25 30 35 40 45 50  
(c) 8 : 8 16 24 32 40 48 56 64 72 80  
(d) 10 : 10 20 30 40 50 60 70 80 90 100

2. Fill in the blanks :

- (a)  $4 \times 5 = 20$ , So 20 is multiple of 4 and 5.  
(b)  $6 \times 11 = 66$ , So 66 is multiple of 6 and 11.  
(c)  $7 \times 100 = 700$ , So 700 is multiple of 7 and 100.  
(d)  $2 \times 3 \times 5 = 30$ , So 30 is multiple of 2, 3 and 5.

3. Write first five multiple of :

- (a)  $9 \rightarrow 9 \times 1 = 9$ ;  $9 \times 2 = 18$ ;  $9 \times 3 = 27$ ;  $9 \times 4 = 36$ ;  $9 \times 5 = 45$   
(b)  $12 \rightarrow 12 \times 1 = 12$ ;  $12 \times 2 = 24$ ;  $12 \times 3 = 36$ ;  $12 \times 4 = 48$ ;  $12 \times 5 = 60$   
(c)  $15 \rightarrow 15 \times 1 = 15$ ;  $15 \times 2 = 30$ ;  $15 \times 3 = 45$ ;  $15 \times 4 = 60$ ;  $15 \times 5 = 75$   
(d)  $20 \rightarrow 20 \times 1 = 20$ ;  $20 \times 2 = 40$ ;  $20 \times 3 = 60$ ;  $20 \times 4 = 80$ ;  $20 \times 5 = 100$

4. Find the following :

- (a) The multiples of 3 that are greater than 15 and less than 35.  
Multiples of 3 = 18, 21, 24, 27, 30, 33  
(b) The multiples of 4 that are greater than 30 and less than 45.  
Multiples of 4 = 32, 36, 40, 44  
(c) The multiples of 7 that are less than 44.  
Multiples of 7 = 7, 14, 21, 28, 35, 42  
(d) The multiples of 8 that are less than 100 and end in 8.  
Multiples of 8 = 8, 48, 88  
(e) The product of the fifth multiples of 2 and the seventh multiple of 8.  
Product =  $5 \times 2$  and  $7 \times 8$   
= 10 and 56  
=  $10 \times 56 = 560$

**5. Circle the even numbers and tick the odd numbers :**

- (a) 5, 10, 12, 21, 38  
Odd number = 5, 21  
Even number = 10, 12, 38
- (b) 546, 1092, 4689, 15576  
Odd number = 4689  
Even number = 546, 1092, 15576
- (c) 97, 108, 370, 1358, 2245  
Odd number = 97, 2245  
Even number = 108, 370, 1358
- (d) 885, 4352, 8976, 15302, 37910  
Odd number = 885  
Even number = 4352, 8976, 15302, 37910

**6. Write the first three common multiple of :**

- (a) 3 and 5  
Multiples of 3 are : 3, 6, 9, 12, **15**, 18, 21, 24, 27, **30**, 33, 36, 39, 42, **45**  
Multiples of 5 are : 5, 10, **15**, 20, 25, **30**, 35, 40, **45**  
15, 30 and 45 ..... are common multiples of 3 and 5.
- (b) 4 and 8  
Multiples of 4 are : 4, **8**, 12, **16**, 20, **24**, 28, 32, 36, 40, 44, 48  
Multiples of 8 are : **8**, **16**, **24**, 32, 40, 48  
8, 16 and 24 ..... are common multiples of 4 and 8.
- (c) 10 and 20  
Multiples of 10 are : 10, **20**, 30, **40**, 50, **60**, 70  
Multiples of 20 are : **20**, **40**, **60**, 80  
20, 40 and 60 ..... are common multiples of 10 and 20.
- (d) 5, 10 and 20  
Multiples of 5 are : 5, 10, 15, **20**, 25, 30, 35, **40**, 45, 50, 55, **60**  
Multiples of 10 are : 10, **20**, 30, **40**, 50, **60**, 70  
Multiples of 20 are : **20**, **40**, **60**, 80  
20, 40 and 60 ..... are common multiples of 5, 10 and 20.

**7. Write the even numbers between :**

- (a) 37 and 49  
Even number = 38, 40, 42, 44, 46, 48
- (b) 135 and 150  
Even number = 136, 138, 140, 142, 144, 146, 148
- (c) 537 and 549  
Even number = 538, 540, 542, 544, 546, 548

**8. Write the odd numbers between :**

- (a) 60 and 84  
Odd number = 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83

(b) 168 and 180

Odd number = 169, 171, 173, 175, 177, 179

(c) 888 and 900

Odd number = 889, 891, 893, 895, 897, 899



## Exercise 6B

### 1. Fill in the blanks :

(a)  $5 \times 7 = 35$ , So 5 and 7 are **factors** of 35.

(b)  $42 = 7 \times 6$ , So 6 and 7 are **factors** of 42.

(c)  $18 = 2 \times 3 \times 3$ , So 2, 3, 6 and 9 are **factors** of 18.

(d)  $48 = 2 \times 2 \times 2 \times 2 \times 3$ , So 2, 3, 4, 6, 8, 12, 16 and 24 are **factors** of 48.

### 2. Find out whether the first number is a factor of the second number :

$$\begin{array}{r} 7 \\ 16 \overline{) 112} \\ - 112 \\ \hline 0 \end{array}$$

$112 \div 16$  leaves no remainder.  
16 is a factor of 112.

$$\begin{array}{r} 14 \\ 4 \overline{) 56} \\ - 4 \\ \hline 16 \\ - 16 \\ \hline 0 \end{array}$$

$56 \div 4$  leaves no remainder.  
4 is a factor of 56.

$$\begin{array}{r} 15 \\ 15 \overline{) 230} \\ - 15 \\ \hline 80 \\ - 75 \\ \hline 5 \end{array}$$

$230 \div 15$  leaves a remainder as 5.  
15 is not a factor of 230.

$$\begin{array}{r} 15 \\ 9 \overline{) 136} \\ - 9 \\ \hline 46 \\ - 45 \\ \hline 1 \end{array}$$

$136 \div 9$  leaves a remainder as 1.  
9 is not a factor of 136.

### 3. Find out whether the second number is a factor of the first number :

$$\begin{array}{r} 17 \\ 28 \overline{) 476} \\ - 28 \\ \hline 196 \\ - 196 \\ \hline 0 \end{array}$$

$476 \div 28$  leaves no remainder.  
28 is a factor of 476.

$$\begin{array}{r} 6 \\ 13 \overline{) 78} \\ - 78 \\ \hline 0 \end{array}$$

$78 \div 13$  leaves no remainder.  
13 is a factor of 78.

$$\begin{array}{r} 75 \\ 18 \overline{) 1350} \\ \underline{- 126} \phantom{0} \\ 90 \\ \underline{- 90} \\ 0 \end{array}$$

$1350 \div 18$  leaves no remainder.  
18 is a factor of 1350.

$$\begin{array}{r} 32 \\ 56 \overline{) 1914} \\ \underline{- 168} \phantom{0} \\ 134 \\ \underline{- 112} \phantom{0} \\ 22 \end{array}$$

$1914 \div 56$  leaves a remainder  
as 22.

56 is not a factor of 1914.

4. Write two factors of the following numbers, other than 1 and itself.

(a)  $65 = 13, 5$       (b)  $94 = 47, 2$       (c)  $124 = 62, 2$       (d)  $236 = 118, 2$

5. Write all the factors of the following numbers.

(a) 15

Since,  $1 \times 15 = 15$

$3 \times 5 = 15$

$5 \times 3 = 15$

1, 3, 5, 15 are factors of 15.

(b) 50

Since,  $1 \times 50 = 50$

$2 \times 25 = 50$

$5 \times 10 = 50$

$10 \times 5 = 50$

1, 2, 5, 10, 25, 50 are factors of 50.

(c) 96

Since,  $1 \times 96 = 96$

$2 \times 48 = 96$

$3 \times 32 = 96$

$4 \times 24 = 96$

$6 \times 16 = 96$

$8 \times 12 = 96$

1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48

and 96 are factors of 96.

(d) 231

Since,  $1 \times 231 = 231$

$3 \times 77 = 231$

$11 \times 21 = 231$

$7 \times 33 = 231$

1, 3, 7, 11, 21, 33, 77 and 231 are  
factors of 231.



## Exercise 6C

1. Which of these are divisible by 10?

(a) 420, 785, 1030, 5036

A number is divisible by 10, if the digit at its ones place (last digit)  
is 0.

420 and 1030 are divisible by 10.

- (b) 700, 2004, 8070, 6055

A number is divisible by 10, if the digit at its ones place (last digit) is 0.

700 and 8070 are divisible by 10.

**2. Which of these are divisible by 5?**

- (a) 90, 105, 127, 5736

A number is divisible by 5, if the digit at its ones place (last digit) is 0 or 5.

90 and 105 are divisible by 5.

- (b) 85, 68, 210, 3005

A number is divisible by 5, if the digit at its ones place (last digit) is 0 or 5.

85, 210 and 3005 are divisible by 5.

**3. Which of these are divisible by 2?**

- (a) 18, 71, 700, 1465, 13598

A number is divisible by 2, if its last digit is an even number, that is the number ends in 0, 2, 4, 6 or 8.

18, 700, 13598 are divisible by 2.

- (b) 36, 90, 583, 5060, 24689

A number is divisible by 2, if its last digit is an even number, that is the number ends in 0, 2, 4, 6 or 8.

36, 90 and 5060 are divisible by 2.

**4. Which of these are divisible by 3?**

- (a) 18, 81, 67, 179, 4320

A number is divisible by 3 if the sum of its digits is divisible by 3.

18, 81 and 4320 are divisible by 3.

- (b) 87, 505, 777, 888, 906

A number is divisible by 3 if the sum of its digits is divisible by 3.

87, 777, 888 and 906 are divisible by 3.



**Exercise 6D**

**1. Tick the prime numbers :**

- (a) 2, 3, 4, 9, 13

Prime number = 2, 3, 13

- (b) 7, 15, 19, 24, 29

Prime number = 7, 19, 29

2. Tick the composite numbers :

(a) 5, 10, 15, 20, 23

(b) 11, 22, 33, 37, 39

Composite number = 10, 15, 20

Composite number = 22, 33, 39

3. Write the following :

(a) Prime number = 2, 3, 5, 7, 11, 13, 17, 19, 23

(b) Prime number = 53, 59, 61, 67, 71, 73, 79

(c)  $\therefore$  Prime number = Even number = 2

(d)  $\therefore$  2 and 3 are prime numbers.

$\therefore$  Difference =  $3 - 2 = 1$

4. Write the following :

(a) Composite numbers = 4, 6, 8, 9

(b) Composite numbers = 21, 22, 24, 25, 26, 27, 28

(c)  $\therefore$  The two smallest composite numbers = 4 and 9

$\therefore$  Difference =  $9 - 4 = 5$

(d)  $\therefore$  The two smallest composite numbers = 4 and 6

$\therefore$  Sum =  $6 + 4 = 10$

5. State True or False :

(a) All even numbers are composite numbers. = **False**

(b) The difference of two even numbers must be even. = **True**

(c) The sum of two composite numbers may be a prime number. = **False**

(d) A number which is not a prime number, must be a composite number. = **False**

6. Write prime factorisation of the following numbers by division method :

$$\begin{array}{r|l} 2 & 36 \\ \hline 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$36 = 2 \times 2 \times 3 \times 3$$

$$\begin{array}{r|l} 2 & 78 \\ \hline 3 & 39 \\ \hline 13 & 13 \\ \hline & 1 \end{array}$$

$$78 = 2 \times 3 \times 13$$

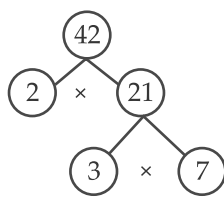
(c) 
$$\begin{array}{r|l} 5 & 175 \\ \hline 5 & 35 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$
  
 $175 = 5 \times 5 \times 7$

(d) 
$$\begin{array}{r|l} 2 & 512 \\ \hline 2 & 256 \\ \hline 2 & 128 \\ \hline 2 & 64 \\ \hline 2 & 32 \\ \hline 2 & 16 \\ \hline 2 & 8 \\ \hline 2 & 4 \\ \hline 2 & 2 \\ \hline & 1 \end{array}$$
  
 $512 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

(e) 
$$\begin{array}{r|l} 2 & 1040 \\ \hline 2 & 520 \\ \hline 2 & 260 \\ \hline 2 & 130 \\ \hline 5 & 65 \\ \hline 13 & 13 \\ \hline & 1 \end{array}$$
  
 $1040 = 2 \times 2 \times 2 \times 2 \times 5 \times 13$

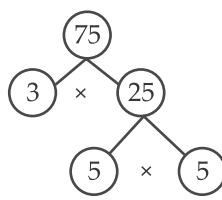
7. Find the prime factorisation by drawing factor tree:

(a) 42



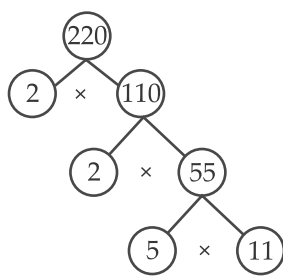
$42 = 2 \times 3 \times 7$

(b) 75



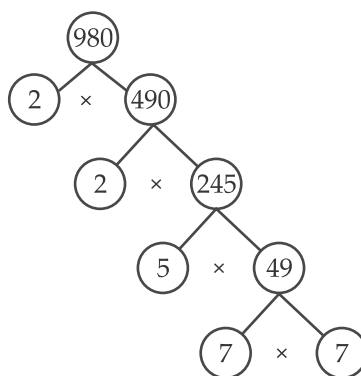
$75 = 3 \times 5 \times 5$

(c) 220



$220 = 2 \times 2 \times 5 \times 11$

(d) 980



$980 = 2 \times 2 \times 5 \times 7 \times 7$



Do yourself.

**Apply Your Learning**

Observation, Curiosity, Communication

$$\begin{array}{r|l} 2 & 36 \\ \hline 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 1 \end{array}$$

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

$$\therefore 36 = 2 \times 2 \times 3 \times 3 \quad \therefore 49 = 7 \times 7$$

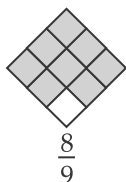
**Think, Solve and Learn**

Problem-solving, Critical and Logical thinking

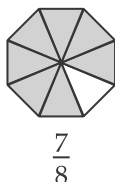
$\therefore$  55 is a multiple of 5, and its reverse 55 is also a multiple of 5.  
So, 55 and 55 are magic multiples of 5.

**7****Fractions****Exercise 7A****1. Colour to show the fractions:**

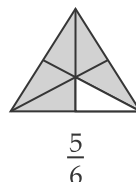
(a)



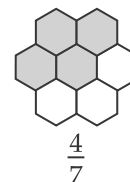
(b)



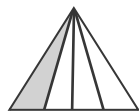
(c)



(d)

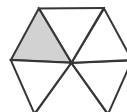
**2. Write in numbers and words the fraction that coloured parts shows:**

(a)



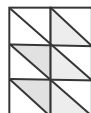
$$\frac{1}{4} \text{ One-fourth}$$

(b)



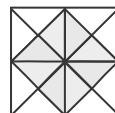
$$\frac{1}{6} \text{ One-sixth}$$

(c)



$$\frac{5}{12} \text{ Five-twelfths}$$

(d)



$$\frac{8}{16} = \frac{1}{2} \text{ One-half}$$



3. Fill in the blanks :

- (a) In  $\frac{4}{5}$ , The numerator is **4** and the denominator is **5**.  
 (b) In  $\frac{17}{22}$ , The numerator is **17** and the denominator is **22**.  
 (c) If the numerator is 8 and denominator is 13, fraction is **8/13**.  
 (d) If the denominator is 15 and numerator is 11, fraction is **11/15**.

4. Fill in the blanks :

- (a)  $\frac{1}{2}$  of 4 = **2**                      (b)  $\frac{1}{3}$  of 9 = **3**                      (c)  $\frac{1}{4}$  of 20 = **5**  
 (d)  $\frac{1}{5}$  of 10 = **2**                      (e)  $\frac{2}{3}$  of 12 = **2 × 4 = 8**                      (f)  $\frac{3}{7}$  of 21 = **3 × 3 = 9**

5. Write the fractions in the words :

- (a)  $\frac{1}{4}$  = **One-fourth**                      (b)  $\frac{3}{5}$  = **Three-fifth**  
 (c)  $\frac{4}{7}$  = **Four-sevenths**                      (d)  $\frac{5}{9}$  = **Five-nineths**

6. Write in the numeral form :

- (a) One-fifth =  $\frac{1}{5}$                       (b) Five-twelveths =  $\frac{5}{12}$   
 (c) Seven-ninths =  $\frac{7}{9}$                       (d) Four-fifteenths =  $\frac{4}{15}$



**Exercise 7B**

1. Encircle the like fractions :

- (a)  $\frac{1}{3}$ ,  $\frac{4}{7}$ ,  $\frac{2}{3}$ ,  $\frac{5}{6}$                       (b)  $\frac{5}{6}$ ,  $\frac{5}{7}$ ,  $\frac{6}{7}$ ,  $\frac{4}{5}$   
 (c)  $\frac{2}{3}$ ,  $\frac{3}{10}$ ,  $\frac{5}{9}$ ,  $\frac{7}{10}$                       (d)  $\frac{4}{13}$ ,  $\frac{6}{15}$ ,  $\frac{5}{13}$ ,  $\frac{7}{13}$

2. Cross (X) the unlike fractions in the following sets of fractions :

- (a)  $\frac{3}{13}$ ,  $\frac{1}{15}$ ,  $\frac{4}{15}$ ,  $\frac{3}{17}$ ,  $\frac{7}{15}$                       (b)  $\frac{6}{25}$ ,  $\frac{11}{20}$ ,  $\frac{17}{25}$ ,  $\frac{3}{14}$ ,  $\frac{9}{25}$   
 (c)  $\frac{7}{35}$ ,  $\frac{4}{20}$ ,  $\frac{6}{35}$ ,  $\frac{4}{35}$ ,  $\frac{3}{35}$                       (d)  $\frac{3}{9}$ ,  $\frac{2}{12}$ ,  $\frac{5}{13}$ ,  $\frac{7}{15}$ ,  $\frac{7}{12}$

3. Encircle the unit fractions :

- $\frac{2}{3}$ ,  $\frac{1}{3}$ ,  $\frac{5}{3}$ ,  $\frac{7}{1}$ ,  $\frac{1}{7}$ ,  $\frac{1}{8}$ ,  $\frac{2}{9}$ ,  $\frac{3}{1}$ ,  $\frac{1}{9}$ ,  $\frac{1}{5}$

4. Encircle the proper fractions :

- (a)  $\frac{5}{4}$ ,  $\frac{4}{5}$                       (b)  $\frac{3}{7}$ ,  $\frac{7}{3}$                       (c)  $\frac{9}{8}$ ,  $\frac{8}{9}$                       (d)  $\frac{1}{7}$ ,  $\frac{7}{1}$

5. Encircle the mixed fractions :

- (a)  $(1\frac{1}{4})$ ,  $\frac{1}{7}$ ,  $(2\frac{1}{5})$ ,  $\frac{8}{7}$       (b)  $\frac{7}{12}$ ,  $(5\frac{5}{6})$ ,  $\frac{8}{8}$ ,  $(2\frac{3}{7})$   
 (c)  $(5\frac{2}{3})$ ,  $\frac{10}{11}$ ,  $\frac{2}{9}$ ,  $(3\frac{4}{5})$       (c)  $\frac{6}{23}$ ,  $(6\frac{2}{3})$ ,  $(1\frac{7}{9})$ ,  $\frac{7}{9}$

6. Write the integral part and fractional part of each fraction :

- (a)  $2\frac{2}{3}$       (b)  $5\frac{3}{4}$   
 Integral part = 2      Integral part = 5  
 Fractional part =  $\frac{2}{3}$       Fractional part =  $\frac{3}{4}$   
 (c)  $7\frac{1}{9}$       (d)  $4\frac{4}{5}$   
 Integral part = 7      Integral part = 4  
 Fractional part =  $\frac{1}{9}$       Fractional part =  $\frac{4}{5}$

7. Write in the form of fraction :

- (a)  $5 \div 3 = \frac{5}{3}$       (b)  $7 \div 4 = \frac{7}{4}$       (c)  $18 \div 5 = \frac{18}{5}$       (d)  $27 \div 8 = \frac{27}{8}$

8. Change into mixed fraction :

- (a)  $\frac{5}{4}$        $5 \div 4$       Q = 1 R = 1  
 $\therefore \frac{5}{4} = 1\frac{1}{4}$       (b)  $\frac{7}{3}$        $7 \div 3$       Q = 2 R = 1  
 $\therefore \frac{7}{3} = 2\frac{1}{3}$   
 (c)  $\frac{12}{5}$        $12 \div 5$       Q = 2 R = 2  
 $\therefore \frac{12}{5} = 2\frac{2}{5}$       (d)  $\frac{18}{7}$        $18 \div 7$       Q = 2 R = 4  
 $\therefore \frac{18}{7} = 2\frac{4}{7}$

9. Change into improper fractions :

- (a)  $2\frac{1}{3} = \frac{2 \times 3 + 1}{3} = \frac{7}{3}$       (b)  $4\frac{3}{5} = \frac{4 \times 5 + 3}{5} = \frac{23}{5}$   
 (c)  $7\frac{4}{5} = \frac{7 \times 5 + 4}{5} = \frac{39}{5}$       (d)  $6\frac{2}{7} = \frac{6 \times 7 + 2}{7} = \frac{44}{7}$



**Exercise 7C**

1. Write the equivalent fractions :

- (a)  $\frac{1}{2}$  =  $\frac{4}{8}$   
 (b)  $\frac{3}{5}$  =  $\frac{6}{10}$   
 (c)  $\frac{1}{4}$  =  $\frac{4}{16}$

2. Fill in the blanks :

(a)  $\frac{1}{3} = \frac{\boxed{2}}{6}$       (b)  $\frac{1}{2} = \frac{\boxed{5}}{10}$       (c)  $\frac{2}{5} = \frac{\boxed{6}}{15}$       (d)  $\frac{3}{7} = \frac{\boxed{9}}{21}$

3. Fill in the blanks :

(a)  $\frac{1}{2} = \frac{1 \times \boxed{5}}{2 \times 5} = \frac{1 \times 3}{2 \times \boxed{3}} = \frac{1 \times 7}{2 \times \boxed{7}}$       (b)  $\frac{3}{4} = \frac{3 \times 2}{4 \times \boxed{2}} = \frac{3 \times \boxed{4}}{4 \times 4} = \frac{3 \times \boxed{7}}{\boxed{4} \times 7}$   
(c)  $\frac{16}{32} = \frac{16 \div \boxed{2}}{32 \div 2} = \frac{16 \div 4}{32 \div \boxed{4}} = \frac{16 \div \boxed{8}}{32 \div 8}$   
(d)  $\frac{12}{24} = \frac{12 \div 2}{24 \div \boxed{2}} = \frac{12 \div 3}{24 \div \boxed{3}} = \frac{12 \div \boxed{6}}{24 \div 6}$

4. Write the equivalent fractions with denominator 20 :

(a)  $\frac{1}{2} = \frac{\boxed{10}}{\boxed{20}}$       (b)  $\frac{3}{4} = \frac{\boxed{15}}{\boxed{20}}$   
(c)  $\frac{2}{5} = \frac{\boxed{8}}{\boxed{20}}$       (d)  $\frac{7}{10} = \frac{\boxed{14}}{\boxed{20}}$

5. Write the equivalent fractions with numerator 24 :

(a)  $\frac{8}{10} = \frac{\boxed{24}}{\boxed{30}}$       (b)  $\frac{6}{11} = \frac{\boxed{24}}{\boxed{44}}$   
(c)  $\frac{4}{5} = \frac{\boxed{24}}{\boxed{30}}$       (d)  $\frac{3}{10} = \frac{\boxed{24}}{\boxed{80}}$

6. Write two equivalent fractions of : (Use multiplication)

(a) We have,  $\frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$       (b) We have,  $\frac{4}{7} = \frac{4 \times 2}{7 \times 2} = \frac{8}{14}$   
 $\frac{2}{5} = \frac{2 \times 3}{5 \times 3} = \frac{6}{15}$        $\frac{4}{7} = \frac{4 \times 3}{7 \times 3} = \frac{12}{21}$   
 $\therefore \frac{4}{10}$  and  $\frac{6}{15}$  are equivalent       $\therefore \frac{8}{14}$  and  $\frac{12}{21}$  are equivalent  
fraction of  $\frac{2}{5}$ .      fraction of  $\frac{4}{7}$ .  
(c) We have,  $\frac{6}{11} = \frac{6 \times 2}{11 \times 2} = \frac{12}{22}$       (d) We have,  $\frac{5}{11} = \frac{5 \times 2}{11 \times 2} = \frac{10}{22}$   
 $\frac{6}{11} = \frac{6 \times 3}{11 \times 3} = \frac{18}{33}$        $\frac{5}{11} = \frac{5 \times 3}{11 \times 3} = \frac{15}{33}$   
 $\therefore \frac{12}{22}$  and  $\frac{18}{33}$  are equivalent       $\therefore \frac{10}{22}$  and  $\frac{15}{33}$  are equivalent  
fraction of  $\frac{6}{11}$ .      fraction of  $\frac{5}{11}$ .

7. Write two equivalent fractions of : (Use division)

- (a) We have,  $\frac{10}{20} = \frac{10 \div 2}{20 \div 2} = \frac{5}{10}$   
 $\frac{10}{20} = \frac{10 \div 5}{20 \div 5} = \frac{2}{4}$   
 $\therefore \frac{5}{10}$  and  $\frac{2}{4}$  are equivalent  
fraction of  $\frac{10}{20}$ .
- (b) We have,  $\frac{18}{24} = \frac{18 \div 2}{24 \div 2} = \frac{9}{12}$   
 $\frac{18}{24} = \frac{18 \div 3}{24 \div 3} = \frac{6}{8}$   
 $\therefore \frac{9}{12}$  and  $\frac{6}{8}$  are equivalent  
fraction of  $\frac{18}{24}$ .
- (c) We have,  $\frac{24}{36} = \frac{24 \div 2}{36 \div 2} = \frac{12}{18}$   
 $\frac{24}{36} = \frac{24 \div 3}{36 \div 3} = \frac{8}{12}$   
 $\therefore \frac{12}{18}$  and  $\frac{8}{12}$  are equivalent  
fraction of  $\frac{24}{36}$ .
- (d) We have,  $\frac{27}{45} = \frac{27 \div 3}{45 \div 3} = \frac{9}{15}$   
 $\frac{27}{45} = \frac{27 \div 9}{45 \div 9} = \frac{3}{5}$   
 $\therefore \frac{9}{15}$  and  $\frac{3}{5}$  are equivalent  
fraction of  $\frac{27}{45}$ .

8. Change into like fractions :

- (a)  $\frac{1}{3} = \frac{1 \times 5}{3 \times 5} = \frac{5}{15}$   
 $\frac{2}{5} = \frac{2 \times 3}{5 \times 3} = \frac{6}{15}$
- (b)  $\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}$   
 $\frac{4}{9} = \frac{4 \times 1}{9 \times 1} = \frac{4}{9}$
- (c)  $\frac{5}{7} = \frac{5 \times 11}{7 \times 11} = \frac{55}{77}$   
 $\frac{7}{11} = \frac{7 \times 7}{11 \times 7} = \frac{49}{77}$
- (d)  $\frac{3}{10} = \frac{3 \times 3}{10 \times 3} = \frac{9}{30}$   
 $\frac{4}{15} = \frac{4 \times 2}{15 \times 2} = \frac{8}{30}$

9. Check whether given fractions are equal or not (by cross multiplication)

- (a)  $\frac{3}{5}$  and  $\frac{6}{10}$   
 $\therefore 3 \times 10 = 30$  and  $5 \times 6 = 30$   
As the products are equal.  
 $\therefore \frac{3}{5}$  and  $\frac{6}{10}$  are equal.
- (b)  $\frac{3}{8}$  and  $\frac{9}{24}$   
 $\therefore 3 \times 24 = 72$  and  $8 \times 9 = 72$   
As the products are equal.  
 $\therefore \frac{3}{8}$  and  $\frac{9}{24}$  are equal.
- (c)  $\frac{4}{5}$  and  $\frac{16}{25}$   
 $\therefore 5 \times 16 = 80$  and  $4 \times 25 = 100$   
As the products are not equal.  
 $\therefore \frac{4}{5}$  and  $\frac{16}{25}$  are not equal.
- (d)  $\frac{8}{9}$  and  $\frac{4}{6}$   
 $\therefore 9 \times 4 = 36$  and  $8 \times 6 = 48$   
As the products are not equal.  
 $\therefore \frac{8}{9}$  and  $\frac{4}{6}$  are not equal.

10. Numerator of a fraction = 28

Denominator of a fraction = ?

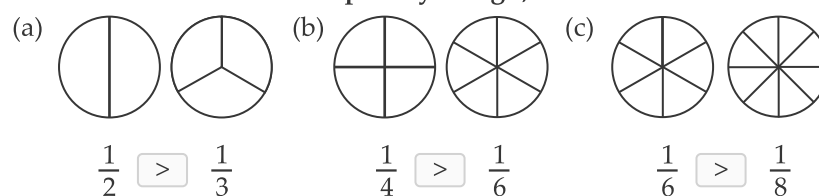
$$\therefore \frac{4}{5} = \frac{4 \times 7}{5 \times 7} = \frac{28}{35}$$

$\therefore$  Denominator of a fraction = 35



### Exercise 7D

1. Shade the fractions and compare by using  $<$ ,  $=$  or  $>$ :



2. Fill in with  $<$ ,  $>$  or  $=$ :

(a)  $\frac{3}{5} > \frac{2}{5}$     (b)  $\frac{4}{7} < \frac{6}{7}$     (c)  $\frac{3}{8} > \frac{1}{8}$     (d)  $\frac{11}{13} > \frac{10}{13}$

3. Fill in with  $<$ ,  $>$  or  $=$ :

(a) By cross multiply.

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

Since,  $2 \times 9 = 18$

and  $2 \times 5 = 10$

We have  $18 > 10$

$$\frac{2}{5} > \frac{2}{9}$$

(b) Changing to like fractions.

$$\frac{4}{7} = \frac{4 \times 9}{7 \times 9} = \frac{36}{63}$$

$$\text{and } \frac{4}{9} = \frac{4 \times 7}{9 \times 7} = \frac{28}{63}$$

$$\text{We have } \frac{36}{63} > \frac{28}{63}$$

$$\frac{4}{7} > \frac{4}{9}$$

(c) Changing to like fractions.

$$\frac{9}{13} = \frac{9 \times 14}{13 \times 14} = \frac{126}{182}$$

$$\text{and } \frac{9}{14} = \frac{9 \times 13}{14 \times 13} = \frac{117}{182}$$

$$\text{We have } \frac{126}{182} > \frac{117}{182}$$

$$\frac{9}{13} > \frac{9}{14}$$

(d) Changing to like fractions.

$$\frac{8}{13} = \frac{8 \times 9}{13 \times 9} = \frac{72}{117}$$

$$\text{and } \frac{8}{9} = \frac{8 \times 13}{9 \times 13} = \frac{104}{117}$$

$$\text{We have } \frac{72}{117} < \frac{104}{117}$$

$$\frac{8}{13} < \frac{8}{9}$$

4. Fill in with <, > or =:

(a) Changing to like fractions.

$$\frac{3}{7} = \frac{3 \times 9}{7 \times 9} = \frac{27}{63}$$

$$\text{and } \frac{4}{9} = \frac{4 \times 7}{9 \times 7} = \frac{28}{63}$$

$$\text{We have } \frac{27}{63} < \frac{28}{63}$$

$$\frac{3}{7} < \frac{4}{9}$$

(b) Changing to like fractions.

$$\frac{7}{9} = \frac{7 \times 11}{9 \times 11} = \frac{77}{99}$$

$$\text{and } \frac{8}{11} = \frac{8 \times 9}{11 \times 9} = \frac{72}{99}$$

$$\text{We have } \frac{77}{99} > \frac{72}{99}$$

$$\frac{7}{9} > \frac{8}{11}$$

(c) Changing to like fractions.

$$\frac{15}{16} = \frac{15 \times 3}{16 \times 3} = \frac{45}{48}$$

$$\text{and } \frac{11}{12} = \frac{11 \times 4}{12 \times 4} = \frac{44}{48}$$

$$\text{We have } \frac{45}{48} > \frac{44}{48}$$

$$\frac{15}{16} > \frac{11}{12}$$

(d) Changing to like fractions.

$$\frac{6}{15} = \frac{6 \times 13}{15 \times 13} = \frac{78}{195}$$

$$\text{and } \frac{7}{13} = \frac{7 \times 15}{13 \times 15} = \frac{105}{195}$$

$$\text{We have } \frac{78}{195} < \frac{105}{195}$$

$$\frac{6}{15} < \frac{7}{13}$$

5. Fill in with <, > or =:

(a) The integral parts of the fractions are 2 and 1.

$$\text{As } 2 > 1, \quad 2\frac{3}{7} > 1\frac{1}{4}$$

(b) The integral parts of the fractions are 3 and 4.

$$\text{As } 3 < 4, \quad 3\frac{3}{5} < 4\frac{1}{3}$$

$$(c) \text{ We gave } 1\frac{2}{5} = \frac{1 \times 5 + 2}{5} = \frac{7}{5}$$

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

$$(d) \text{ We gave } 7\frac{5}{8} = \frac{7 \times 8 + 5}{8} = \frac{61}{8}, \quad 7\frac{4}{5} = \frac{7 \times 5 + 4}{5} = \frac{39}{5}$$

$$\text{Now compare } \frac{61}{8} \text{ and } \frac{39}{5} \text{ or } \frac{61}{8} \times \frac{39}{5}$$

$$61 \times 5 = 305, \quad 39 \times 8 = 312$$

$$\text{As } 305 < 312, \quad \frac{61}{8} < \frac{39}{5}$$

$$\text{So, } 7\frac{5}{8} < 7\frac{4}{5}$$

6. **Encircle the greatest :**

(a)  $\frac{3}{7}, \frac{5}{7}, \frac{2}{7}, \left(\frac{6}{7}\right)$  (b)  $\frac{4}{13}, \frac{7}{13}, \left(\frac{9}{13}\right), \frac{3}{13}$  (c)  $\frac{5}{16}, \frac{3}{16}, \left(\frac{9}{16}\right), \frac{7}{16}$

7. **Encircle the smallest :**

(a)  $\left(\frac{5}{18}\right), \frac{13}{18}, \frac{17}{18}, \frac{7}{18}$  (b)  $\left(\frac{2}{9}\right), \frac{4}{9}, \frac{7}{9}, \frac{5}{9}$  (c)  $\frac{13}{21}, \left(\frac{8}{21}\right), \frac{17}{21}, \frac{16}{21}$

8. **Encircle the greatest :**

(a)  $\left(\frac{5}{7}\right), \frac{5}{9}, \frac{5}{17}, \frac{5}{8}$  (b)  $\frac{8}{11}, \frac{8}{9}, \left(\frac{8}{5}\right), \frac{8}{13}$  (c)  $\frac{9}{11}, \frac{9}{13}, \frac{9}{15}, \left(\frac{9}{7}\right)$

9. **Arrange in ascending order :**

(a) Numerators in ascending order : 2, 4, 5, 7

$\therefore$  Fraction in ascending order :  $\frac{2}{9}, \frac{4}{9}, \frac{5}{9}, \frac{7}{9}$

(b) Denominators in descending order : 13, 11, 9, 8

$\therefore$  Fraction in ascending order :  $\frac{7}{13}, \frac{7}{11}, \frac{7}{9}, \frac{7}{8}$

(c) Denominators in descending order : 11, 9, 7, 5

$\therefore$  Fraction in ascending order :  $3\frac{4}{11}, 3\frac{4}{9}, 3\frac{4}{7}, 3\frac{4}{5}$

10. **Arrange in descending order :**

(a) Numerators in descending order : 9, 7, 5, 3

$\therefore$  Fraction in descending order :  $\frac{9}{11}, \frac{7}{11}, \frac{5}{11}, \frac{3}{11}$

(b) Denominators in ascending order : 5, 7, 9, 11

$\therefore$  Fraction in descending order :  $\frac{8}{5}, \frac{8}{7}, \frac{8}{9}, \frac{8}{11}$

(c) Changing to like fractions.

$$2\frac{1}{3} = \frac{2 \times 3 + 1}{3} = \frac{7}{3} = \frac{7 \times 4}{3 \times 4} = \frac{28}{12}$$

$$3\frac{3}{4} = \frac{3 \times 4 + 3}{4} = \frac{15}{4} = \frac{15 \times 3}{4 \times 3} = \frac{45}{12}$$

$$5\frac{1}{2} = \frac{5 \times 2 + 1}{2} = \frac{11}{2} = \frac{11 \times 6}{2 \times 6} = \frac{66}{12}$$

$$4\frac{2}{3} = \frac{4 \times 3 + 2}{3} = \frac{14}{3} = \frac{14 \times 4}{3 \times 4} = \frac{56}{12}$$

Numerators in descending order : 66, 56, 45, 28

$$\Rightarrow \frac{66}{12}, \frac{56}{12}, \frac{45}{12}, \frac{28}{12}$$

$\therefore$  Fraction in descending order :  $5\frac{1}{2}, 4\frac{2}{3}, 3\frac{3}{4}, 2\frac{1}{3}$



## Exercise 7E

### 1. Reduce to lowest term:

- (a) Prime factors of  $4 = 2 \times 2$ , and  $10 = 2 \times 5$

$$\therefore \frac{4}{10} = \frac{2 \times 2}{2 \times 5} = \frac{2}{5}$$

- (b) Prime factors of  $3 = 1 \times 3$ , and  $9 = 3 \times 3$

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

- (c) Prime factors of  $2 = 1 \times 2$ , and  $12 = 2 \times 2 \times 3$

$$\therefore \frac{2}{12} = \frac{1 \times 2}{2 \times 2 \times 3} = \frac{1}{6}$$

- (d) Prime factors of  $6 = 2 \times 3$ , and  $18 = 2 \times 3 \times 3$

$$\therefore \frac{6}{18} = \frac{2 \times 3}{2 \times 3 \times 3} = \frac{1}{3}$$

- (e) Prime factors of  $12 = 2 \times 2 \times 3$ , and  $36 = 2 \times 2 \times 3 \times 3$

$$\therefore \frac{12}{36} = \frac{2 \times 2 \times 3}{2 \times 2 \times 3 \times 3} = \frac{1}{3}$$

- (f) Prime factors of  $14 = 2 \times 7$ , and  $49 = 7 \times 7$

$$\therefore \frac{14}{49} = \frac{2 \times 7}{7 \times 7} = \frac{2}{7}$$

- (g) Prime factors of  $20 = 2 \times 2 \times 5$ , and  $50 = 2 \times 5 \times 5$

$$\therefore \frac{20}{50} = \frac{2 \times 2 \times 5}{2 \times 5 \times 5} = \frac{2}{5}$$

### 2. Which of these are in lowest terms?

- (a)  $\frac{3}{7}$  cannot be reduced, so it is in lowest term.

- (b) We have  $\frac{4}{18} = \frac{2 \times 2}{2 \times 3 \times 3} = \frac{2}{9}$

$\frac{4}{18}$  can be reduced, so it is not in lowest term.

- (c)  $\frac{2}{13}$  cannot be reduced, so it is in lowest term.

- (d)  $\frac{3}{7}$  cannot be reduced, so it is in lowest term.

- (e) We have  $\frac{10}{20} = \frac{2 \times 5}{2 \times 2 \times 5} = \frac{1}{2}$

$\frac{10}{20}$  can be reduced, so it is not in lowest term.

- (f) We have  $\frac{24}{42} = \frac{2 \times 2 \times 2 \times 3}{2 \times 3 \times 7} = \frac{4}{7}$

$\frac{24}{42}$  can be reduced, so it is not in lowest term.



(g) We have  $\frac{66}{88} = \frac{2 \times 3 \times 11}{2 \times 2 \times 2 \times 11} = \frac{3}{4}$

$\frac{66}{88}$  can be reduced, so it is not in lowest term.

(h) We have  $\frac{33}{42} = \frac{3 \times 11}{2 \times 3 \times 7} = \frac{11}{14}$

$\frac{33}{42}$  can be reduced, so it is not in lowest term.

(i)  $\frac{13}{15}$  cannot be reduced, so it is in lowest term.

(j)  $\frac{19}{21}$  cannot be reduced, so it is in lowest term.

(k)  $\frac{21}{23}$  cannot be reduced, so it is in lowest term.

(l)  $\frac{53}{97}$  cannot be reduced, so it is in lowest term.

(m)  $\frac{25}{27}$  cannot be reduced, so it is in lowest term.

(n)  $\frac{23}{28}$  cannot be reduced so, it is in lowest term.

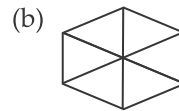


## Exercise 7F

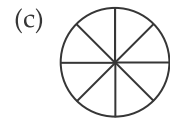
### 1. Add by colouring:



$$\frac{3}{8} \text{ Red} + \frac{2}{8} \text{ Blue} = \frac{5}{8}$$

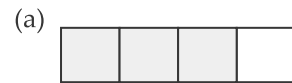


$$\frac{1}{6} \text{ Green} + \frac{2}{6} \text{ Yellow} = \frac{3}{6} = \frac{1}{2}$$

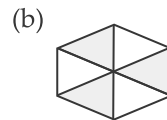


$$\frac{2}{8} \text{ Black} + \frac{3}{8} \text{ Pink} = \frac{5}{8}$$

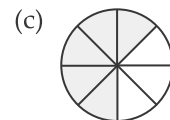
### 2. Subtract by crossing out:



$$\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2}$$



$$\frac{3}{6} - \frac{2}{6} = \frac{3-2}{6} = \frac{1}{6}$$



$$\frac{5}{8} - \frac{2}{8} = \frac{5-2}{8} = \frac{3}{8}$$

3. Add the following:

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

$$(c) \frac{7}{18} + \frac{3}{18} = \frac{7+3}{18} = \frac{10}{18}$$

$$(b) \frac{5}{16} + \frac{4}{16} = \frac{5+4}{16} = \frac{9}{16}$$

$$(d) \frac{5}{22} + \frac{7}{22} = \frac{5+7}{22} = \frac{12}{22}$$

4. Subtract the following:

$$(a) \frac{7}{9} - \frac{2}{9} = \frac{7-2}{9} = \frac{5}{9}$$

$$(c) \frac{15}{16} - \frac{13}{16} = \frac{15-13}{16} = \frac{2}{16} = \frac{1}{8}$$

$$(b) \frac{3}{8} - \frac{2}{8} = \frac{3-2}{8} = \frac{1}{8}$$

$$(d) \frac{12}{17} - \frac{9}{17} = \frac{12-9}{17} = \frac{3}{17}$$

5. Add the following:

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

$$\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$$

$$\frac{1}{3} = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

$$\therefore \frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6}$$

$$= \frac{3+2}{6} = \frac{5}{6}$$

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

$$\frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$$

$$\frac{4}{5} = \frac{4 \times 3}{5 \times 3} = \frac{12}{15}$$

$$\therefore \frac{2}{3} + \frac{4}{5} = \frac{10}{15} + \frac{12}{15}$$

$$= \frac{10+12}{15} = \frac{22}{15}$$

$$(c) \frac{5}{7} + \frac{3}{5}$$

$$\frac{5}{7} = \frac{5 \times 5}{7 \times 5} = \frac{25}{35}$$

$$\frac{3}{5} = \frac{3 \times 7}{5 \times 7} = \frac{21}{35}$$

$$\therefore \frac{5}{7} + \frac{3}{5} = \frac{25}{35} + \frac{21}{35}$$

$$= \frac{25+21}{35} = \frac{46}{35}$$

$$(d) \frac{8}{13} + \frac{8}{10}$$

$$\frac{8}{13} = \frac{8 \times 10}{13 \times 10} = \frac{80}{130}$$

$$\frac{8}{10} = \frac{8 \times 13}{10 \times 13} = \frac{104}{130}$$

$$\therefore \frac{8}{13} + \frac{8}{10} = \frac{80}{130} + \frac{104}{130}$$

$$= \frac{80+104}{130} = \frac{184}{130} = \frac{92}{65}$$

6. Subtract the following:

$$(a) \frac{3}{5} - \frac{1}{6}$$

$$\frac{3}{5} = \frac{3 \times 6}{5 \times 6} = \frac{18}{30}$$

$$\frac{1}{6} = \frac{1 \times 5}{6 \times 5} = \frac{5}{30}$$

$$\therefore \frac{3}{5} - \frac{1}{6} = \frac{18}{30} - \frac{5}{30}$$

$$= \frac{18-5}{30} = \frac{13}{30}$$

$$(b) \frac{7}{8} - \frac{2}{5}$$

$$\frac{7}{8} = \frac{7 \times 5}{8 \times 5} = \frac{35}{40}$$

$$\frac{2}{5} = \frac{2 \times 8}{5 \times 8} = \frac{16}{40}$$

$$\therefore \frac{7}{8} - \frac{2}{5} = \frac{35}{40} - \frac{16}{40}$$

$$= \frac{35-16}{40} = \frac{19}{40}$$

$$(c) \frac{5}{9} - \frac{3}{7}$$

$$\frac{5}{9} = \frac{5 \times 7}{9 \times 7} = \frac{35}{63}$$

$$\frac{3}{7} = \frac{3 \times 9}{7 \times 9} = \frac{27}{63}$$

$$\begin{aligned} \therefore \frac{5}{9} - \frac{3}{7} &= \frac{35}{63} - \frac{27}{63} \\ &= \frac{35 - 27}{63} = \frac{8}{63} \end{aligned}$$

$$(d) \frac{9}{10} - \frac{13}{20}$$

$$\frac{9}{10} = \frac{9 \times 2}{10 \times 2} = \frac{18}{20}$$

$$\begin{aligned} \therefore \frac{9}{10} - \frac{13}{20} &= \frac{18}{20} - \frac{13}{20} \\ &= \frac{18 - 13}{20} = \frac{5}{20} = \frac{1}{4} \end{aligned}$$



### Exercise 7G

1. Anil got of the total marks in an exam =  $\frac{7}{10}$

Total marks = 100

$$\begin{aligned} \frac{7}{10} \text{ of } 100 &= \frac{7}{10} \times 100 \\ &= 7 \times (100 \div 10) \\ &= 7 \times 10 = 70 \text{ marks} \end{aligned}$$

2. Weight of tomatoes =  $\frac{1}{2}$  kg

$$\text{Weight of potatoes} = \frac{3}{2} \text{ kg}$$

$$\text{Weight of onions} = \frac{1}{2} \text{ kg}$$

$$\text{Total weight of vegetables} = \frac{1}{2} + \frac{3}{2} + \frac{1}{2} = \frac{1 + 3 + 1}{2} = \frac{5}{2} \text{ kg} = 2 \frac{1}{2} \text{ kg}$$

3. Manju spend of her pocket money on books =  $\frac{1}{3}$

$$\text{Manju spend pocket money on her medicines} = \frac{1}{6}$$

$$\begin{aligned} \text{Total spend pocket money} &= \frac{1}{3} + \frac{1}{6} \\ &= \frac{1 \times 2 + 1}{6} = \frac{2 + 1}{6} = \frac{3}{6} = \frac{1}{2} \end{aligned}$$

Manju had in her pocket = ₹ 300

$$\begin{aligned} \text{Money left} &= \frac{1}{2} \text{ of ₹ 300} \\ &= \frac{1}{2} \times ₹ 300 \\ &= 1 \times (₹ 300 \div 2) \\ &= 1 \times ₹ 150 = ₹ 150 \end{aligned}$$

4. Sita drank milk =  $\frac{3}{8}$  L  
 Gita drank milk =  $\frac{1}{8}$  L  
 Total drank milk =  $\frac{3}{8} + \frac{1}{8} = \frac{3+1}{8} = \frac{4}{8}$  L  
 Ajug had of milk =  $\frac{7}{8}$  L  
 Total drank milk =  $\frac{4}{8}$  L  
 Milk left in the jug =  $\frac{7}{8} - \frac{4}{8} = \frac{7-4}{8} = \frac{3}{8}$  L
5. Trapti complete of work in first day =  $\frac{7}{15}$   
 Trapti complete of work in next-day =  $\frac{4}{15}$   
 Work left to be complete =  $\frac{7}{15} - \frac{4}{15} = \frac{7-4}{15}$   
 $= \frac{3}{15}$  of work is left.
6. Mr. Sharma gave of money to his wife =  $\frac{2}{9}$   
 Mr. Sharma gave of money to his son =  $\frac{4}{9}$   
 The greatest share =  $\frac{2}{9} < \frac{4}{9}$   
 $\therefore$  His son get the share *i.e.*,  $\frac{4}{9}$
7. Water of in a tank = 800 L  
 A family used of the water =  $\frac{1}{4}$  of 800 L  
 $= \frac{1}{4} \times 800 \text{ L} = 1 \times (800 \text{ L} \div 4)$   
 $= 1 \times 200 \text{ L} = 200 \text{ L}$   
 Water left in the tank =  $800 \text{ L} - 200 \text{ L} = 600 \text{ L}$
8. Number of pages in the book = 250  
 Moni read of a book in a day =  $\frac{2}{5}$  of 250  
 $= \frac{2}{5} \times 250 = 2 \times (250 \div 5)$   
 $= 2 \times 50 = 100$   
 Number of pages left to be read =  $250 - 100 = 150$  pages

Do yourself.

**Apply Your Learning**

Observation, Communication, Curiosity

Do yourself.

**Think, Solve and Learn**

Critical and Logical thinking, Problem-solving

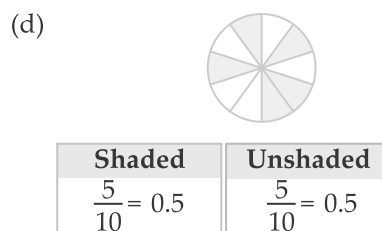
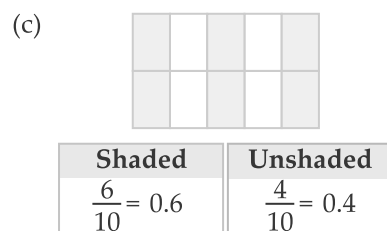
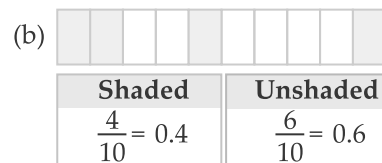
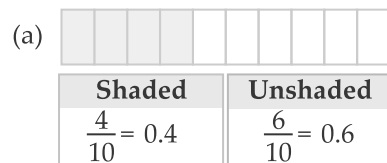


# Decimals



## Exercise 8A

1. Write the shaded and unshaded parts as common fractions and decimal fractions.



2. Colour to show the decimals.



0.7



0.5



0.3



0.09

3. Write these as decimals :

(a)  $\frac{3}{10} = 0.3$       (b)  $\frac{7}{10} = 0.7$       (c)  $\frac{9}{10} = 0.9$       (d)  $\frac{6}{100} = 0.06$

(e)  $\frac{17}{1000} = 0.017$       (f)  $\frac{703}{1000} = 0.703$

(g)  $\frac{27}{100} = 0.27$

4. Write these as common fractions and in words :

(a)  $0.5 = \frac{5}{10}$

Fraction  $\frac{5}{10}$  in words,  
zero point five

(b)  $0.03 = \frac{3}{100}$

Fraction  $\frac{3}{100}$  in words,  
zero point zero three

(c)  $0.004 = \frac{4}{1000}$

Fraction  $\frac{4}{1000}$  in words,  
zero point zero zero four

(d)  $0.19 = \frac{19}{100}$

Fraction  $\frac{19}{100}$  in words,  
zero point one nine

(e)  $0.006 = \frac{6}{1000}$

Fraction  $\frac{6}{1000}$  in words,  
zero point zero zero six

(f)  $0.037 = \frac{37}{1000}$

Fraction  $\frac{37}{1000}$  in words,  
zero point zero three seven

(g)  $0.245 = \frac{245}{1000}$

Fraction  $\frac{245}{1000}$  in words,  
zero point two four five



**Exercise 8B**

1. Write as common fractions :

(a)  $0.36 = \frac{36}{100}$

(b)  $0.375 = \frac{375}{1000}$

(c)  $0.081 = \frac{81}{1000}$

(d)  $2.3 = \frac{23}{10}$

(e)  $4.370 = \frac{437}{100}$

(f)  $54.6 = \frac{546}{10}$

2. Write as decimal fractions :

(a)  $\frac{27}{10} = 2.7$

(b)  $\frac{39}{100} = 0.39$

(c)  $\frac{308}{100} = 3.08$

(d)  $\frac{456}{10} = 45.6$

(e)  $\frac{4835}{1000} = 4.835$

(f)  $\frac{60}{1000} = 0.06$

3. Fill in the blanks :

| Fraction                 | Decimal | Read As                         |
|--------------------------|---------|---------------------------------|
| (a) $\frac{35}{10}$      | 3.5     | Three point five                |
| (b) $\frac{308}{100}$    | 3.08    | Three point zero eight          |
| (c) $\frac{1709}{100}$   | 17.09   | Seventeen point zero nine       |
| (d) $\frac{17034}{1000}$ | 17.034  | Seventeen point zero three four |
| (e) $\frac{10017}{1000}$ | 100.17  | Hundred point one seven         |
| (f) $\frac{40044}{1000}$ | 40.044  | Forty point zero four four      |

4. Write the place value. (For decimal parts, write as common fractions)

(a)  $7.0 = \textcircled{7} \rightarrow 7 \text{ ones}$

(b)  $0.8 = \textcircled{8} \rightarrow \frac{8}{10} \text{ or } 8 \text{ tenths}$

(c)  $0.06 = \textcircled{6} \rightarrow \frac{6}{100} \text{ or } 6 \text{ hundredths}$

(d)  $4.005 = \textcircled{5} \rightarrow \frac{5}{1000} \text{ or } 5 \text{ thousandths}$

(e)  $2.375 = \textcircled{2} \rightarrow 2 \text{ ones } \textcircled{3} \rightarrow \frac{3}{10} \text{ or } 3 \text{ tenths } \textcircled{7} \rightarrow \frac{7}{100}$

or 7 hundredths  $\textcircled{5} \rightarrow \frac{5}{1000} \text{ or } 5 \text{ thousandths}$

(f)  $19.086 = \textcircled{1} \rightarrow 1 \text{ tens } \textcircled{9} \rightarrow 9 \text{ ones } \textcircled{8} \rightarrow \frac{8}{100} \text{ or } 8 \text{ hundredths}$

$\textcircled{6} \rightarrow \frac{6}{1000} \text{ or } 6 \text{ thousandths}$

(g)  $127.35 = \textcircled{1} \rightarrow 1 \text{ hundred } \textcircled{2} \rightarrow 2 \text{ tens } \textcircled{5} \rightarrow \frac{5}{100}$   
or 5 hundredths  $\textcircled{3} \rightarrow \frac{3}{10}$  or 3 tenths

(h)  $47.539 = \textcircled{5} \rightarrow \frac{5}{10}$  or 5 tenths  $\textcircled{3} \rightarrow \frac{3}{100}$  or 3 hundredths  
 $\textcircled{7} \rightarrow 7 \text{ ones } \textcircled{9} \rightarrow \frac{9}{1000}$  or 9 thousandths

5. Fill in the blanks :

(a)  $0.85 = \frac{\boxed{8}}{\boxed{10}} + \frac{\boxed{5}}{\boxed{100}}$  (b)  $3.04 = \frac{\boxed{3}}{\boxed{1}} + \frac{\boxed{0}}{\boxed{10}} + \frac{\boxed{4}}{\boxed{100}}$

(c)  $17.497 = \frac{\boxed{10}}{\boxed{1}} + \frac{\boxed{7}}{\boxed{1}} + \frac{\boxed{4}}{\boxed{10}} + \frac{\boxed{9}}{\boxed{100}} + \frac{\boxed{7}}{\boxed{1000}}$

(d)  $32.875 = \frac{\boxed{30}}{\boxed{1}} + \frac{\boxed{2}}{\boxed{1}} + \frac{\boxed{8}}{\boxed{10}} + \frac{\boxed{7}}{\boxed{100}} + \frac{\boxed{5}}{\boxed{1000}}$

6. Write in expanded form. (For the decimal parts, write as common fractions)

(a)  $0.76 = \frac{7}{10} + \frac{6}{100}$  (b)  $0.037 = \frac{0}{10} + \frac{3}{100} + \frac{7}{1000}$

(c)  $35.409 = 30 + 5 + \frac{4}{10} + \frac{0}{100} + \frac{9}{1000}$

(d)  $308.605 = 300 + 0 + 8 + \frac{6}{10} + \frac{0}{100} + \frac{5}{1000}$

7. Fill in the blanks with the short form (decimal form).

(a)  $\frac{3}{10} + \frac{9}{100} = 0.39$  (b)  $\frac{2}{10} + \frac{5}{100} + \frac{8}{1000} = 0.258$

(c)  $7 + \frac{5}{10} + \frac{3}{100} = 7.53$  (d)  $200 + 30 + 7 + \frac{0}{10} + \frac{2}{100} + \frac{1}{1000}$   
 $= 237.021$

8. Compare and fill in the blanks with >, < or =:

(a)  $0.7 > 0.08$  (b)  $1.0 > 0.999$  (c)  $.05 > .005$   
(d)  $0.8 = 0.80$  (e)  $0.33 = 0.330$  (f)  $0.83 > .803$

9. Write in ascending order :

(a)  $0.52, .502, 5.2, 5.02, 50.2$   $0.502, 0.52, 5.02, 5.2, 50.2$   
(b)  $3.7, .307, 3.07, .370, 30.7$   $0.307, 0.370, 3.07, 3.7, 30.7$   
(c)  $2.046, 0.246, 2.460, 2.406, 2.106$   $0.246, 2.046, 2.106, 2.406, 2.460$

10. Write in descending order :

(a)  $.57, .507, .057, .075, .705$   $0.705, 0.57, 0.507, 0.075, 0.057$



(b) .60, .606, .060, .006, .660

0.660, 0.606, 0.60, 0.060, 0.006

(c) .331, 1.301, 1.013, 1.103, 1.330

1.330, 1.301, 1.103, 1.013, 0.331



## Exercise 8C

Add the following:

1. (a) 
$$\begin{array}{r} 0.5 \\ + 0.4 \\ \hline 0.9 \end{array}$$
 (b) 
$$\begin{array}{r} \overset{1}{0}.7 \\ + 0.6 \\ \hline 1.3 \end{array}$$
 (c) 
$$\begin{array}{r} \overset{1}{0}.8 \\ + 0.9 \\ \hline 1.7 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{1}{1}.6 \\ + 0.5 \\ \hline 2.1 \end{array}$$

2. (a) 
$$\begin{array}{r} 0.63 \\ + 0.35 \\ \hline 0.98 \end{array}$$
 (b) 
$$\begin{array}{r} \overset{1}{4}.\overset{1}{4}5 \\ + 0.56 \\ \hline 5.01 \end{array}$$

(c) 
$$\begin{array}{r} \overset{1}{3}.\overset{1}{8}8 \\ + 1.44 \\ \hline 5.32 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{1}{2}0.\overset{1}{3}8 \\ + 4.84 \\ \hline 25.22 \end{array}$$

3. (a) 
$$\begin{array}{r} \overset{1}{\text{₹}}173.\overset{1}{7}5 \\ + \text{₹}85.25 \\ \hline 259.00 \end{array}$$
 (b) 
$$\begin{array}{r} \overset{1}{\text{₹}}301.05 \\ + \text{₹}79.70 \\ \hline 380.75 \end{array}$$

(c) 
$$\begin{array}{r} \overset{1}{\text{₹}}576.\overset{1}{8}5 \\ + \text{₹}108.65 \\ \hline 685.50 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{1}{\text{₹}}593.\overset{1}{2}5 \\ + \text{₹}6.75 \\ \hline 600.00 \end{array}$$

4. (a) 
$$\begin{array}{r} \overset{1}{3}.\overset{1}{0}74 \\ + 28.973 \\ + 1.009 \\ + 10.101 \\ \hline 43.157 \end{array}$$
 (b) 
$$\begin{array}{r} \overset{2}{3}2.\overset{1}{0}22 \\ + 56.001 \\ + 78.404 \\ + 39.789 \\ \hline 206.216 \end{array}$$

(c) 
$$\begin{array}{r} \overset{1}{1}\overset{2}{3}2.\overset{1}{4}3 \\ + 57.327 \\ + 268.1 \\ + 5.273 \\ \hline 463.130 \end{array}$$



## Exercise 8D

Subtract the following:

1. (a) 
$$\begin{array}{r} 0.7 \\ - 0.3 \\ \hline 0.4 \end{array}$$
 (b) 
$$\begin{array}{r} 4.3 \\ - 1.1 \\ \hline 3.2 \end{array}$$
 (c) 
$$\begin{array}{r} \overset{4}{\cancel{5}}.\overset{14}{\cancel{4}} \\ - 2.7 \\ \hline 2.7 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{2}{\cancel{3}}.\overset{11}{\cancel{1}} \\ - 0.6 \\ \hline 2.5 \end{array}$$

2. (a) 
$$\begin{array}{r} ₹ 9.25 \\ - ₹ 3.25 \\ \hline 6.00 \end{array}$$
 (b) 
$$\begin{array}{r} ₹ 43.75 \\ - ₹ 22.50 \\ \hline 21.25 \end{array}$$

(c) 
$$\begin{array}{r} \overset{1}{\cancel{1}}\overset{1}{\cancel{7}}\overset{1}{\cancel{3}}.25 \\ + ₹ 84.75 \\ \hline 258.00 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{1}{\cancel{5}}\overset{1}{\cancel{0}}\overset{1}{\cancel{3}}.\overset{1}{\cancel{3}}5 \\ + ₹ 198.85 \\ \hline 702.20 \end{array}$$

3. (a) 
$$\begin{array}{r} \overset{3}{\cancel{4}}\overset{13}{\cancel{4}}.\overset{11}{\cancel{1}}\overset{2}{\cancel{3}}\overset{15}{\cancel{5}} \\ - 25.307 \\ \hline 18.828 \end{array}$$
 (b) 
$$\begin{array}{r} \overset{9}{\cancel{10}}\overset{9}{\cancel{0}}\overset{16}{\cancel{1}}\overset{12}{\cancel{0}}\overset{13}{\cancel{0}} \\ - 0.965 \\ \hline 099.768 \end{array}$$

(c) 
$$\begin{array}{r} \overset{8}{\cancel{1}}\overset{12}{\cancel{9}}\overset{11}{\cancel{8}}.333 \\ - 48.333 \\ \hline 150.985 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{2}{\cancel{3}}\overset{10}{\cancel{1}}\overset{10}{\cancel{1}}.\overset{12}{\cancel{3}}\overset{10}{\cancel{0}}\overset{10}{\cancel{0}} \\ - 289.385 \\ \hline 021.915 \end{array}$$

4. Find the difference between:

(a) 
$$\begin{array}{r} \overset{1}{\cancel{2}}\overset{12}{\cancel{3}}.\overset{15}{\cancel{5}} \\ - 14.9 \\ \hline 08.6 \end{array}$$
 (b) 
$$\begin{array}{r} \overset{1}{\cancel{2}}\overset{14}{\cancel{5}}.\overset{9}{\cancel{0}}\overset{10}{\cancel{0}} \\ - 9.55 \\ \hline 15.45 \end{array}$$

(c) 
$$\begin{array}{r} \overset{6}{\cancel{4}}\overset{11}{\cancel{7}}.\overset{11}{\cancel{1}}43 \\ - 43.341 \\ \hline 03.802 \end{array}$$
 (d) 
$$\begin{array}{r} \overset{9}{\cancel{3}}\overset{9}{\cancel{0}}\overset{9}{\cancel{0}}.\overset{9}{\cancel{0}}\overset{10}{\cancel{0}} \\ - 255.25 \\ \hline 044.75 \end{array}$$

(e)

|   |   |    |    |    |   |   |
|---|---|----|----|----|---|---|
|   | 3 | 12 | 11 | 10 |   |   |
| 1 | 4 | 3  | .  | 2  | 0 |   |
| - | 1 | 3  | 4  | .  | 3 | 7 |
|   | 0 | 0  | 8  | .  | 8 | 3 |

(f)

|   |   |   |   |   |    |   |
|---|---|---|---|---|----|---|
| 1 | 9 | 9 | 9 | 9 | 10 |   |
| 2 | 0 | 0 | . | 0 | 0  |   |
| - | 1 | 7 | 8 | . | 3  | 7 |
|   | 0 | 2 | 1 | . | 6  | 2 |



### Maths Fun

Problem-solving, Observation

Number of beads in red colour =  $\overset{1}{4}5$   
 Number of beads in blue colour =  $+ 25$   
 Number of beads in yellow colour =  $+ 20$   
 Total number of beads in colour =  $\underline{90}$

Total beads = 100  
 Number of beads in colour = 90  
 Number of beads in green colour =  $100 - 90 = 10$

|   |    |
|---|----|
| 0 | 10 |
| 1 | 0  |
| - | 9  |
|   | 1  |
|   | 0  |

Red beads = 45 = Fractions  $\frac{45}{100}$   
 Blue beads = 25 = Fractions  $\frac{25}{100}$   
 Yellow beads = 20 = Fractions  $\frac{20}{100}$   
 Green beads = 10 = Fractions  $\frac{10}{100}$

### Apply Your Learning

Critical and Logical thinking, Problem-solving

Do yourself.

### Think, Solve and Learn

Problem-solving, Critical and Logical thinking

The decimal number = 2894.056



9

## Patterns and Symmetry



### Exercise 9A

1. Observe the pattern and draw the next three figures.



2. Write the next three terms in each pattern.

(a) 2, 8, 32, 128 → 512, 2048, 8192

(b) 11, 22, 66, 246 → 1320, 7920, 55440

(c) 100, 200, 400, 700 → 1100, 1600, 2200

3. Using the codes A = 1, B = 2, C = 3, ..... decode the following messages.

(a) 13 1 20 8 19

M A T H S

9 19

I S

6 21 14

F U N

(b) 1 12 12

A L L

20 8 5

T H E

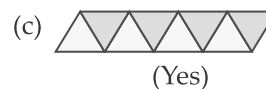
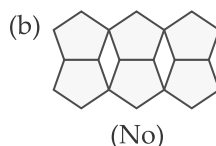
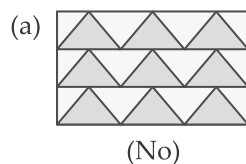
2 5 19 20

B E S T

4. Complete the number towers by identifying the patterns.

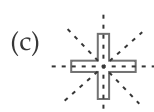
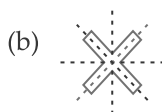
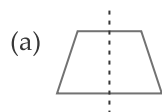


5. Which of the following patterns forms tessellation?

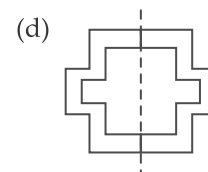
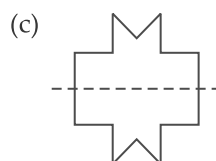
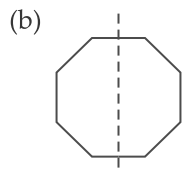
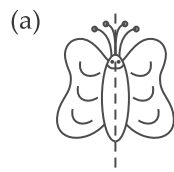


## Exercise 9B

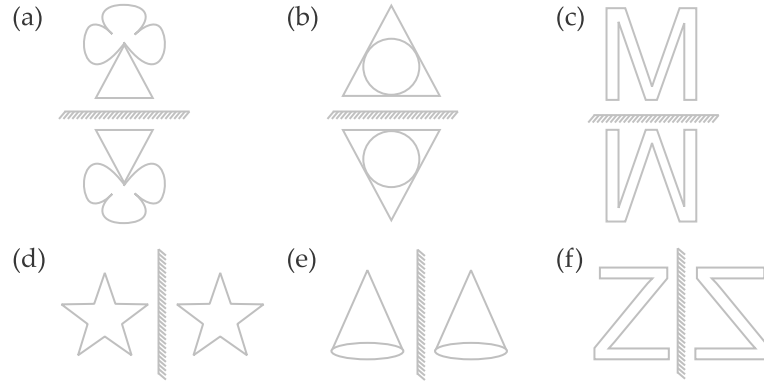
1. Determine whether the given shapes are symmetric or not. Then, draw the line(s) of symmetry, if any.



2. Complete the following figures using the dashed line as the line of symmetry in each case.



3. Draw the mirror images of the following figures using  as mirror line in each case.



**Maths Fun**

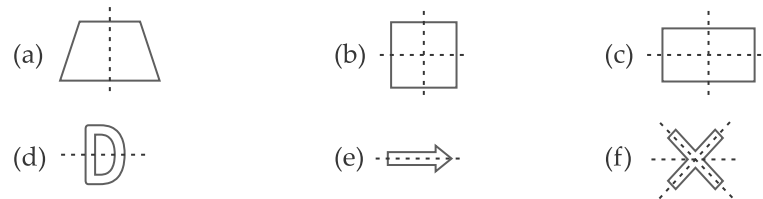
Reflection, Observation, Creativity

Do yourself.

**Apply Your Learning**

Problem-solving, Applicative thinking

Draw the lines of symmetry in the following figures :



**Think, Solve and Learn**

Critical and logical thinking, Observation

Saral has made the following code to write secret messages.

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

Using the code given above, decode the following messages.

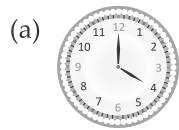
1. NZGSH      RH      NB      UZELFIRGV      HFYQVXG
2. QZR      SRMW
1. **MATHS**      **IS**      **MY**      **FAVOURITE**      **SUBJECT**
2. **JAI**      **HIND**

# 10 Time

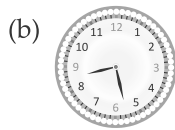


## Exercise 10A

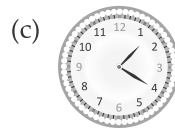
1. Write the time as shown :



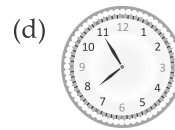
4 : 00



8 : 27

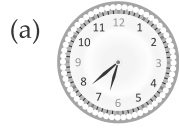


1 : 20

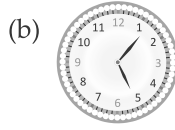


7 : 55

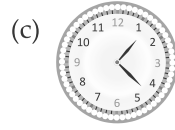
2. Write the time as shown :



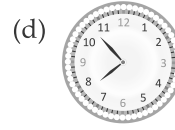
6 : 38



5 : 07

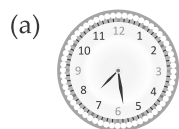


1 : 22

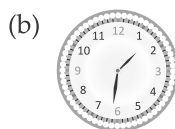


7 : 53

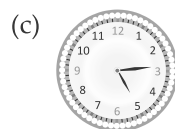
3. Draw the hands to show the time :



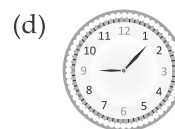
7 : 28



1 : 32

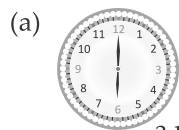


5 : 13



9 : 07

4. How much time has passed?

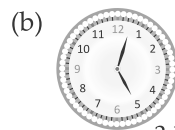


a.m.



a.m.

45 minutes



a.m.



a.m.

1 hour



p.m.



p.m.

5 hours 7 minutes



p.m.



p.m.

4 hour

5. Fill in the blanks with A.M. or P.M.

- (a) 4 o'clock in the morning **A.M.**
- (b) 7 o'clock in the evening **P.M.**
- (c) 10:30 at night **P.M.**
- (d) 3:00 at night **A.M.**
- (e) 9:05 in the morning **A.M.**
- (f) 12:00 noon **P.M.**
- (g) Midnight **12:00 A.M.**
- (h) 12:40 night **A.M.**
- (i) 20 min past midnight **11:40 P.M.**
- (j) 10 min to 5 in the evening **4:50 P.M.**

6. Fill in the blanks :

- (a) Number of hours between 7 a.m. and noon = **5 hours**.
- (b) Number of hours between 6 P.M. and Mid-night = **6 hours**.
- (c) Number of hours between 11 a.m. and 3 p.m. = **4 hours**.
- (d) Number of hours between noon and midnight = **12 hours**.
- (e) Number of hours between 9 p.m. and 2 a.m. = **5 hours**.



**Exercise 10B**

1. Fill in the blanks :

- (a) 4 hours =  $4 \times 60 = 240$  minutes
- (b) 5 weeks =  $5 \times 7 = 35$  days
- (c) 13 minutes =  $13 \times 60 = 780$  seconds
- (d) 6 days =  $6 \times 24 = 144$  hours
- (e) 90 days = \_\_\_\_\_ months  
 $\therefore 30 \text{ days} = 1 \text{ month}$   
 $\therefore 90 \text{ days} = 90 \div 30 \text{ months} = \mathbf{3 \text{ months}}$
- (f) 180 seconds = \_\_\_\_\_ minutes  
 $\therefore 60 \text{ seconds} = 1 \text{ minutes}$   
 $\therefore 180 \text{ seconds} = 180 \div 60 \text{ minutes} = \mathbf{3 \text{ minutes}}$

**2. Convert to seconds :**

(a) 5 minutes

We know 1 minute = 60 seconds

$$\begin{aligned}\therefore 5 \text{ minutes} &= 5 \times 60 \text{ seconds} \\ &= 300 \text{ seconds}\end{aligned}$$

(b) 4 minutes 12 seconds

We know 1 minute = 60 seconds

$$\therefore 4 \text{ minutes} = 4 \times 60 \text{ seconds} = 240 \text{ seconds}$$

$$\therefore 4 \text{ min } 12 \text{ sec} = 240 \text{ sec} + 12 \text{ sec} = 252 \text{ seconds}$$

(c) 15 min 23 sec

We know 1 minutes = 60 seconds

$$\therefore 15 \text{ minutes} = 15 \times 60 \text{ seconds} = 900 \text{ seconds}$$

$$\therefore 15 \text{ min } 23 \text{ sec} = 900 \text{ sec} + 23 \text{ sec} = 923 \text{ seconds}$$

(d) 2 hours

We know 1 hour = 60 minutes

1 minute = 60 seconds

$$\therefore 2 \text{ hours} = 2 \times 60 \times 60 \text{ seconds} = 7200 \text{ seconds}$$

**3. Change to minutes :**

(a) 4 hours

We know 1 hour = 60 minutes

$$\therefore 4 \text{ hours} = 4 \times 60 \text{ minutes} = 240 \text{ minutes}$$

(b) 5 h 35 min

We know 1 hour = 60 minutes

$$\therefore 5 \text{ hours} = 5 \times 60 \text{ minutes} = 300 \text{ minutes}$$

$$\therefore 5 \text{ h } 35 \text{ min} = 300 \text{ min} + 35 \text{ min} = 335 \text{ minutes}$$

(c) 12 h 43 min

We know 1 hour = 60 minutes

$$\therefore 12 \text{ hours} = 12 \times 60 \text{ minutes} = 720 \text{ minutes}$$

$$\therefore 12 \text{ h } 43 \text{ min} = 720 \text{ min} + 43 \text{ min} = 763 \text{ minutes}$$



(d) 2 days

We know 1 hour = 60 minutes

1 hour = 60 minutes

$\therefore 2 \text{ days} = 2 \times 24 \times 60 \text{ minutes} = 2880 \text{ minutes}$

**4. Convert to hours :**

(a) 8 days

We know 1 day = 24 hours

$\therefore 8 \text{ days} = 8 \times 24 \text{ hours} = 192 \text{ hours}$

(b) 2 weeks

We know 1 week = 7 days

1 day = 24 hours

$\therefore 2 \text{ weeks} = 2 \times 7 \times 24 \text{ hours} = 336 \text{ hours}$

(c) 5 days 16 hours

We know 1 day = 24 hours

$\therefore 5 \text{ days} = 5 \times 24 \text{ hours} = 120 \text{ hours}$

$\therefore 5 \text{ days } 16 \text{ hours} = 120 \text{ hours} + 16 \text{ hours} = 136 \text{ hours}$

(d) 2 months

We know 1 month = 30 days

1 day = 24 hours

$\therefore 2 \text{ months} = 2 \times 30 \times 24 \text{ hours} = 1440 \text{ hours}$

**5. Change to days :**

(a) 5 weeks

We know 1 week = 7 days

$\therefore 5 \text{ weeks} = 7 \times 5 \text{ days} = 35 \text{ days}$

(b) 2 months 2 weeks

We know 1 month = 30 days

$\therefore 2 \text{ months} = 2 \times 30 \text{ days} = 60 \text{ days}$

and 1 week = 7 days

$\therefore 2 \text{ weeks} = 2 \times 7 \text{ days} = 14 \text{ days}$

$\therefore 2 \text{ months } 2 \text{ weeks} = 60 \text{ days} + 14 \text{ days} = 74 \text{ days}$

(c) 4 weeks 3 days

We know 1 week = 7 days

$$\therefore 4 \text{ weeks} = 4 \times 7 \text{ days} = 28 \text{ days}$$

$$\therefore 4 \text{ weeks 3 days} = 28 \text{ days} + 3 \text{ days} = 31 \text{ days}$$

(d) 3 months

We know 1 month = 30 days

$$\therefore 3 \text{ months} = 3 \times 30 \text{ days} = 90 \text{ days}$$

**6. Convert to hours and minutes :**

(a) 145 minutes

We know 60 minutes = 1 hour

$$\therefore 145 \text{ minutes} = 145 \div 60 \text{ hours}$$

$$= 2 \text{ hours 25 minutes}$$

$$\begin{array}{r} 2 \\ 60 \overline{) 145} \\ \underline{-120} \\ 25 \end{array}$$

(b) 382 minutes

We know 60 minutes = 1 hour

$$\therefore 382 \text{ minutes} = 382 \div 60 \text{ hours}$$

$$= 6 \text{ hours 22 minutes}$$

$$\begin{array}{r} 6 \\ 60 \overline{) 382} \\ \underline{-360} \\ 22 \end{array}$$

(c) 3873 minutes

We know 60 minutes = 1 hour

$$\therefore 3873 \text{ minutes} = 3873 \div 60 \text{ hours}$$

$$= 64 \text{ hours 33 minutes}$$

$$\begin{array}{r} 64 \\ 60 \overline{) 3873} \\ \underline{-360} \\ 273 \\ \underline{-240} \\ 33 \end{array}$$

(d) 200 minutes

We know 60 minutes = 1 hour

$$\therefore 200 \text{ minutes} = 200 \div 60 \text{ hours}$$

$$= 3 \text{ hours 20 minutes}$$

$$\begin{array}{r} 3 \\ 60 \overline{) 200} \\ \underline{-180} \\ 20 \end{array}$$

**7. Convert to minutes and seconds :**

(a) 87 seconds

We know 60 seconds = 1 minutes

$$\therefore 87 \text{ seconds} = 87 \div 60 \text{ minutes} = 1 \text{ minute 27 seconds}$$

$$\begin{array}{r} 1 \\ 60 \overline{) 87} \\ \underline{-60} \\ 27 \end{array}$$

- (b) 209 seconds  
 We know 60 seconds = 1 minutes  
 $\therefore 209 \text{ seconds} = 209 \div 60 \text{ minutes}$   
 $= 3 \text{ minutes } 29 \text{ seconds}$

$$\begin{array}{r} 3 \\ 60 \overline{) 209} \\ \underline{-180} \\ 29 \end{array}$$

- (c) 480 seconds  
 We know 60 seconds = 1 minutes  
 $\therefore 480 \text{ seconds} = 480 \div 60 \text{ minutes}$   
 $= 8 \text{ minutes } 0 \text{ seconds}$

$$\begin{array}{r} 8 \\ 60 \overline{) 480} \\ \underline{-480} \\ 0 \end{array}$$

- (d) 5408 seconds  
 We know 60 seconds = 1 minutes  
 $\therefore 5408 \text{ seconds} = 5408 \div 60 \text{ minutes}$   
 $= 90 \text{ minutes } 8 \text{ seconds}$

$$\begin{array}{r} 90 \\ 60 \overline{) 5408} \\ \underline{-540} \\ 8 \end{array}$$

8. **Change to days and hours :**

- (a) 40 hours  
 We know 24 hours = 1 day  
 $\therefore 40 \text{ hours} = 40 \div 24 \text{ days}$   
 $= 1 \text{ day } 16 \text{ hours}$

$$\begin{array}{r} 1 \\ 24 \overline{) 40} \\ \underline{-24} \\ 16 \end{array}$$

- (b) 96 hours  
 We know 24 hours = 1 day  
 $\therefore 96 \text{ hours} = 96 \div 24 \text{ days}$   
 $= 4 \text{ days}$

$$\begin{array}{r} 4 \\ 24 \overline{) 96} \\ \underline{-96} \\ 0 \end{array}$$

- (c) 176 hours  
 We know 24 hours = 1 day  
 $\therefore 176 \text{ hours} = 176 \div 24 \text{ days}$   
 $= 7 \text{ days } 8 \text{ hours}$

$$\begin{array}{r} 7 \\ 24 \overline{) 176} \\ \underline{-168} \\ 8 \end{array}$$

- (d) 432 hours  
 We know 24 hours = 1 day  
 $\therefore 432 \text{ hours} = 432 \div 24 \text{ days}$   
 $= 18 \text{ days}$

$$\begin{array}{r} 18 \\ 24 \overline{) 432} \\ \underline{-24} \\ 192 \\ \underline{-192} \\ 0 \end{array}$$

**9. Test for leap year:**

- (a) 2000 ends in two zeroes.  
 $\therefore$  Divided by 400  
 $\therefore$  Divisible by 400  
 So, it is a leap year.
- (b) 2006 does not end in two zeroes.  
 $\therefore$  Divided by 4  
 $\therefore$  Not divisible by 4  
 So, it is not a leap year.
- (c) 2020 does not end in two zeroes.  
 $\therefore$  Divided by 4  
 $\therefore$  Divisible by 4  
 So, it is a leap year.
- (d) 2100 ends in two zeroes.  
 $\therefore$  Divided by 400  
 $\therefore$  Not divisible by 400  
 So, it is not a leap year.
- (e) 2008 does not end in two zeroes.  
 $\therefore$  Divided by 4  
 $\therefore$  Divisible by 4  
 So, it is a leap year.
- (f) 2010 does not end in two zeroes.  
 $\therefore$  Divided by 4  
 $\therefore$  Not divisible by 4  
 So, it is not a leap year.

$$\begin{array}{r} 5 \\ 400 \overline{) 2000} \\ \underline{-2000} \\ 00 \end{array}$$

$$\begin{array}{r} 501 \\ 4 \overline{) 2006} \\ \underline{-20} \\ 06 \\ \underline{-4} \\ 2 \end{array}$$

$$\begin{array}{r} 505 \\ 4 \overline{) 2020} \\ \underline{-20} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

$$\begin{array}{r} 5 \\ 400 \overline{) 2100} \\ \underline{-2000} \\ 100 \end{array}$$

$$\begin{array}{r} 502 \\ 4 \overline{) 2008} \\ \underline{-20} \\ 08 \\ \underline{-8} \\ 0 \end{array}$$

$$\begin{array}{r} 502 \\ 4 \overline{) 2010} \\ \underline{-20} \\ 10 \\ \underline{-8} \\ 2 \end{array}$$

(g) 2400 ends in two zeroes.

∴ Divided by 400

∴ Divisible by 400

So, it is a leap year.

$$\begin{array}{r} 6 \\ 400 \overline{) 2400} \\ \underline{-2400} \\ 00 \end{array}$$

(h) 2020 does not end in two zeroes.

∴ Divided by 4

∴ Divisible by 4

So, it is a leap year.

$$\begin{array}{r} 505 \\ 4 \overline{) 2020} \\ \underline{-20} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$



## Exercise 10C

### 1. Do these sums :

(a) 
$$\begin{array}{r} \text{min.} \\ \textcircled{2} \textcircled{14} \\ \cancel{34} \\ - 16 \\ \hline 18 \end{array}$$

(b) 
$$\begin{array}{r} \text{h} \\ \textcircled{1} \\ 19 \\ + 08 \\ \hline 27 \end{array}$$

(c) 
$$\begin{array}{r} \text{min.} \\ \textcircled{1} \\ 21 \\ + 19 \\ \hline 40 \end{array}$$

(d) 
$$\begin{array}{r} \text{min.} \\ \textcircled{2} \textcircled{17} \\ \cancel{37} \\ - 8 \\ \hline 29 \end{array}$$

(e) 
$$\begin{array}{r} \text{h} \\ \textcircled{3} \textcircled{12} \\ \cancel{42} \\ - 36 \\ \hline 06 \end{array}$$

### 2. Do these sums :

(a) 
$$\begin{array}{r} \text{h} \quad \text{min.} \\ 1324 \\ + 1431 \\ \hline 2755 \end{array}$$

(b) 
$$\begin{array}{r} \text{h} \quad \text{min.} \\ \textcircled{1} \quad \textcircled{1} \\ 4512 \\ + 4729 \\ \hline 9241 \end{array}$$

(c) 
$$\begin{array}{r} \text{h} \quad \text{min.} \\ \textcircled{1} \quad \textcircled{1} \\ 3726 \\ + 5337 \\ \hline 9063 \end{array}$$

(d) 
$$\begin{array}{r} \text{h} \quad \text{min.} \\ \textcircled{1} \quad \textcircled{1} \\ 8347 \\ + 585 \\ \hline 14152 \end{array}$$

### 3. Do these sums :

(a) 
$$\begin{array}{r} \text{h} \quad \text{min.} \\ \textcircled{0} \textcircled{14} \quad \textcircled{0} \textcircled{13} \\ \cancel{14} \quad \cancel{13} \\ - 608 \\ \hline 0805 \end{array}$$

(b) 
$$\begin{array}{r} \text{h} \quad \text{min.} \\ \textcircled{2} \textcircled{15} \\ 37 \quad \cancel{35} \\ - 1627 \\ \hline 2108 \end{array}$$

|     | h                         | min.                             |
|-----|---------------------------|----------------------------------|
| (c) | <del>8</del> <sup>7</sup> | <del>32</del> <sup>(11)(2)</sup> |
| -   | 4                         | 7 2 8                            |
|     | 3                         | 4 0 4                            |

|     | h                           | min.                             |
|-----|-----------------------------|----------------------------------|
| (d) | <del>9</del> <sup>(8)</sup> | <del>31</del> <sup>(17)(2)</sup> |
| -   | 2                           | 9 2 6                            |
|     | 6                           | 8 0 5                            |

4. Add the following :

|     | h   | min. |
|-----|-----|------|
| (a) | 3 2 | 0 0  |
| +   | 0 0 | 2 0  |
|     | 3 2 | 2 0  |

|     | h | min.                          |
|-----|---|-------------------------------|
| (b) | 3 | <del>1</del> <sup>(1)</sup> 6 |
| +   | 4 | 3 4                           |
|     | 7 | 5 0                           |

|     | h   | min.                          |
|-----|-----|-------------------------------|
| (c) | 1 3 | <del>0</del> <sup>(1)</sup> 3 |
| +   | 4 2 | 2 9                           |
|     | 5 5 | 3 2                           |

|     | h   | min. |
|-----|-----|------|
| (d) | 2 0 | 3 7  |
| +   | 1 6 | 2 1  |
|     | 3 6 | 5 8  |

5. Subtract the following :

|     | h  |
|-----|--|
| (a) | <del>8</del> <sup>(4)</sup> <del>7</del> <sup>(17)</sup> |
| -   | 1 8  |
|     | 3 9  |

|     | h | min.   |
|-----|---|--|
| (b) | 2 | <del>4</del> <sup>(3)</sup> <del>8</del> <sup>(13)</sup> |
| -   | 0 | 3 7  |
|     | 2 | 0 6  |

|     | h   | min. |
|-----|---|------|
| (c) | <del>8</del> <sup>(2)</sup> <del>6</del> <sup>(16)</sup> <del>8</del> <sup>(4)</sup> <del>8</del> <sup>(16)</sup> |      |
| -   | 1 9   | 3 7  |
|     | 1 7   | 1 9  |

|     | h  | min. |
|-----|--|------|
| (d) | <del>1</del> <sup>(0)</sup> <del>2</del> <sup>(11)</sup> <del>2</del> <sup>(1)</sup> 0 |      |
| -   | 7  | 2 5  |
|     | 0 4  | 5 5  |

6. Asha plays badminton = 45 minutes

Asha plays table tennis = 1 h 13 minutes

Asha time spend for playing = 1 h 13 min + 45 min

= 1 h 58 minutes

|   | h | min. |
|---|---|------|
|   | 1 | 1 3  |
| + | 0 | 4 5  |
|   | 1 | 5 8  |

7. A quiz show on TV takes = 2 h 30 min

The advertisements during the show takes = 28 minutes

Actual time to quiz show = 2 h 30 min - 28 min

= 2 h 2 minutes

|   | h | min. |
|---|---|------|
|   | 2 | 3 0  |
| - | 0 | 2 8  |
|   | 2 | 0 2  |

8. Total time took to a film = 2 hours 40 minutes  
 Time at advertisements and interval = 25 minutes  
 Actual time to film = 2 h 40 min – 25 min  
 = 2 h 15 min

| h   | min. |
|-----|------|
| 2   | 40   |
| – 0 | 25   |
| 2   | 15   |

9. Total time taken by car = 7 h 30 min  
 Time at take tea = 15 minutes  
 Actual time to run = 7 h 30 min – 15 min  
 = 7 h 15 min

| h   | min. |
|-----|------|
| 7   | 30   |
| – 0 | 15   |
| 7   | 15   |



### Maths in Everyday Life

Observation, Curiosity

Do yourself.

### Apply Your Learning

Critical and Logical thinking, Problem-solving

Time of each period in a school = 1 h 15 min  
 Break time = 35 min  
 Total time of fourth period = 1 h 15 min + 1 h 15 min + 1 h 15 min + 1 h 15 min  
 = 5 hours  
 Break time = 5 h + 25 min = 5 h 25 min  
 First period starts = 10 : 30 a.m.  
 End of the fourth period = 3 : 55 p.m.

### Think, Solve and Learn

Observation, Problem-solving, Applicative thinking

Do yourself.



## Measurement



### Exercise 11A

#### 1. Convert into mm :

(a) 5 cm = \_\_\_\_\_

$\therefore 1 \text{ cm} = 10 \text{ mm}$

$\therefore 5 \text{ cm} = 5 \times 10 \text{ mm}$   
 = 50 mm

(b) 23 cm = \_\_\_\_\_

$\therefore 1 \text{ cm} = 10 \text{ mm}$

$\therefore 23 \text{ cm} = 23 \times 10 \text{ mm}$   
 = 230 mm

|  |  |
|--|--|
| (c) $4\text{ cm } 7\text{ mm} = \underline{\hspace{2cm}}$          | (d) $17\text{ cm } 3\text{ mm} = \underline{\hspace{2cm}}$           |
| $\therefore 1\text{ cm} = 10\text{ mm}$                            | $\therefore 1\text{ cm} = 10\text{ mm}$                              |
| $\therefore 4\text{ cm} = 4 \times 10\text{ mm} = 40\text{ mm}$    | $\therefore 17\text{ cm} = 17 \times 10\text{ mm} = 170\text{ mm}$   |
| $\therefore 4\text{ cm } 7\text{ mm} = 40\text{ mm} + 7\text{ mm}$ | $\therefore 17\text{ cm } 3\text{ mm} = 170\text{ mm} + 3\text{ mm}$ |
| $\hspace{10em} = 47\text{ mm}$                                     | $\hspace{10em} = 173\text{ mm}$                                      |

**2. Convert into m (metres).**

|   |   |
|---|---|
| (a) $700\text{ cm} = \underline{\hspace{2cm}}$                        | (b) $82000\text{ mm} = \underline{\hspace{2cm}}$                      |
| $\therefore 100\text{ cm} = 1\text{ m}$                               | $\therefore 1000\text{ mm} = 1\text{ m}$                              |
| $\therefore 700\text{ cm} = 700 \div 100\text{ m}$                    | $\therefore 82000\text{ mm} = 82000 \div 1000\text{ m}$               |
| $\hspace{10em} = 7\text{ m}$  | $\hspace{10em} = 82\text{ m}$   |
| (c) $8\text{ km } 134\text{ m} = \underline{\hspace{2cm}}$            | (d) $24\text{ km } 25\text{ m} = \underline{\hspace{2cm}}$            |
| $\therefore 1\text{ km} = 1000\text{ m}$                              | $\therefore 1\text{ km} = 1000\text{ m}$                              |
| $\therefore 8\text{ km} = 8 \times 1000\text{ m} = 8000\text{ m}$     | $\therefore 24\text{ km} = 24 \times 1000\text{ m} = 24000\text{ m}$  |
| $\therefore 8\text{ km } 134\text{ m} = 8000\text{ m} + 134\text{ m}$ | $\therefore 24\text{ km } 25\text{ m} = 24000\text{ m} + 25\text{ m}$ |
| $\hspace{10em} = 8134\text{ m}$                                       | $\hspace{10em} = 24025\text{ m}$                                      |

**3. Convert into kg and g.**

|   |   |
|---|---|
| (a) $8000\text{ g} = \underline{\hspace{2cm}}$          | (b) $25000\text{ g} = \underline{\hspace{2cm}}$         |
| $\therefore 1000\text{ g} = 1\text{ kg}$                | $\therefore 1000\text{ g} = 1\text{ kg}$                |
| $\therefore 8000\text{ g} = 8000 \div 1000\text{ kg}$   | $\therefore 25000\text{ g} = 25000 \div 1000\text{ kg}$ |
| $\hspace{10em} = 8\text{ kg}$                           | $\hspace{10em} = 25\text{ kg}$                          |
| (c) $9350\text{ g} = \underline{\hspace{2cm}}$          |   |
| $\therefore 1000\text{ g} = 1\text{ kg}$                |   |
| $\therefore 9350\text{ g} = 9350 \div 1000\text{ kg}$   |   |
| $\hspace{10em} = 9\text{ kg } 350\text{ g}$             |   |
| (d) $12378\text{ g} = \underline{\hspace{2cm}}$         |   |
| $\therefore 1000\text{ g} = 1\text{ kg}$                |   |
| $\therefore 12378\text{ g} = 12378 \div 1000\text{ kg}$ |   |
| $\hspace{10em} = 12\text{ kg } 378\text{ g}$            |   |

$$\begin{array}{r} 9 \\ 1000 \overline{) 9350} \\ \underline{-9000} \\ 350 \end{array}$$

$$\begin{array}{r} 12 \\ 1000 \overline{) 12378} \\ \underline{-1000} \\ 2378 \\ \underline{-2000} \\ 378 \end{array}$$



**4. Convert into millilitres (mL).**

(a) 8 L = \_\_\_\_\_

$\therefore 1 \text{ L} = 1000 \text{ mL}$

$\therefore 8 \text{ L} = 8 \times 1000 \text{ mL}$   
 $= 8000 \text{ mL}$

(b) 36 L = \_\_\_\_\_

$\therefore 1 \text{ L} = 1000 \text{ mL}$

$\therefore 36 \text{ L} = 36 \times 1000 \text{ mL}$   
 $= 36000 \text{ mL}$

(c) 2 L 24 mL = \_\_\_\_\_

$\therefore 1 \text{ L} = 1000 \text{ mL}$

$\therefore 2 \text{ L} = 2 \times 1000 \text{ mL} = 2000 \text{ mL}$   
 $\therefore 2 \text{ L } 24 \text{ mL} = 2000 \text{ mL} + 24 \text{ mL}$   
 $= 2024 \text{ mL}$

(d) 8 L 225 mL = \_\_\_\_\_

$\therefore 1 \text{ L} = 1000 \text{ mL}$

$\therefore 8 \text{ L} = 8 \times 1000 \text{ mL} = 8000 \text{ mL}$   
 $\therefore 8 \text{ L } 225 \text{ mL} = 8000 \text{ mL} + 225 \text{ mL}$   
 $= 8225 \text{ mL}$

**5. Convert the following:**

(a) 86 mm into cm and mm = \_\_\_\_\_

$\therefore 10 \text{ mm} = 1 \text{ cm}$

$\therefore 86 \text{ mm} = 86 \div 10 \text{ cm}$   
 $= 8 \text{ cm } 6 \text{ mm}$

$$\begin{array}{r} 8 \\ 10 \overline{) 86} \\ \underline{-80} \\ 6 \end{array}$$

(b) 345 cm into m and cm = \_\_\_\_\_

$\therefore 100 \text{ cm} = 1 \text{ m}$

$\therefore 345 \text{ cm} = 345 \div 100 \text{ m}$   
 $= 3 \text{ m } 45 \text{ cm}$

$$\begin{array}{r} 3 \\ 100 \overline{) 345} \\ \underline{-300} \\ 45 \end{array}$$

(c) 7 m 78 cm into cm = \_\_\_\_\_

$\therefore 1 \text{ m} = 100 \text{ cm}$

$\therefore 7 \text{ m} = 7 \times 100 \text{ cm} = 700 \text{ cm}$   
 $\therefore 7 \text{ m } 78 \text{ cm} = 700 \text{ cm} + 78 \text{ cm}$   
 $= 778 \text{ cm}$

(d) 7904 m into km and m = \_\_\_\_\_

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

$\therefore 7904 \text{ m} = 7904 \div 1000 \text{ km}$   
 $= 7 \text{ km } 904 \text{ m}$

$$\begin{array}{r} 7 \\ 1000 \overline{) 7904} \\ \underline{-7000} \\ 904 \end{array}$$

5. **Convert:**

(a) 20 kg 45 g into g = \_\_\_\_\_

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

$$\therefore 20 \text{ kg} = 20 \times 1000 \text{ g} = 20000 \text{ g}$$

$$\begin{aligned} \therefore 20 \text{ kg } 45 \text{ g} &= 20000 \text{ g} + 45 \text{ g} \\ &= 20045 \text{ g} \end{aligned}$$

(b) 12005 g into kg and g = \_\_\_\_\_

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

$$\begin{aligned} \therefore 12005 \text{ g} &= 12005 \div 1000 \text{ kg} \\ &= 12 \text{ kg } 5 \text{ g} \end{aligned}$$

$$\begin{array}{r} 12 \\ 1000 \overline{) 12005} \\ \underline{-1000} \phantom{00} \\ 2005 \\ \underline{-2000} \phantom{00} \\ 5 \end{array}$$

(c) 6 L 25 mL into mL = \_\_\_\_\_

$$\therefore 1 \text{ L} = 1000 \text{ mL}$$

$$\therefore 6 \text{ L} = 6 \times 1000 \text{ mL} = 6000 \text{ mL}$$

$$\begin{aligned} \therefore 6 \text{ L } 25 \text{ mL} &= 6000 \text{ mL} + 25 \text{ mL} \\ &= 6025 \text{ mL} \end{aligned}$$

(d) 3050 mL into L and mL = \_\_\_\_\_

$$\therefore 1000 \text{ mL} = 1 \text{ L}$$

$$\begin{aligned} \therefore 3050 \text{ mL} &= 3050 \div 1000 \text{ L} \\ &= 3 \text{ L } 50 \text{ mL} \end{aligned}$$

$$\begin{array}{r} 3 \\ 1000 \overline{) 3050} \\ \underline{-3000} \phantom{00} \\ 50 \end{array}$$



**Exercise 11B**

1. **Add the following:**

|     | cm | mm |
|-----|----|----|
| (a) | 2  | 8  |
| +   | 12 | 3  |
| +   | 30 | 2  |
|     | 45 | 3  |

$$\Rightarrow 45 \text{ cm } 3 \text{ mm}$$

|     | m  | cm |
|-----|----|----|
| (b) | 1  | 3  |
| +   | 36 | 28 |
| +   | 45 | 80 |
|     | 95 | 83 |

$$\Rightarrow 95 \text{ m } 83 \text{ cm}$$

| km   | m   |
|------|-----|
| 15   | 030 |
| + 18 | 280 |
| + 23 | 708 |
| 57   | 018 |

⇒ 57 km 18 m

| km   | m   |
|------|-----|
| 7    | 380 |
| + 12 | 310 |
| + 35 | 708 |
| 55   | 398 |

⇒ 55 km 398 m

## 2. Add the following:

| kg    | g   |
|-------|-----|
| 9     | 500 |
| + 700 |     |
| + 5   | 375 |
| 15    | 575 |

⇒ 15 kg 575 g

| kg   | g   |
|------|-----|
| 25   | 725 |
| + 4  | 035 |
| + 17 | 212 |
| 46   | 972 |

⇒ 46 kg 972 g

| L     | mL  |
|-------|-----|
| 2     | 025 |
| + 875 |     |
| + 14  | 500 |
| 17    | 400 |

⇒ 17 L 400 mL

| L    | mL  |
|------|-----|
| 3    | 50  |
| + 5  | 709 |
| + 13 | 085 |
| 19   | 144 |

⇒ 19 L 144 mL

| m     | cm  |
|-------|-----|
| 235   | 50  |
| + 340 | 25  |
| + 475 | 75  |
| + 300 |     |
| 1050  | 450 |

⇒ 1050 m 450 cm

| kg    | g   |
|-------|-----|
| 8     | 200 |
| + 12  | 650 |
| + 180 | 430 |
| + 360 |     |
| 201   | 640 |

⇒ 201 kg 640 g



## Exercise 11C

### 1. Subtract the following:

(a) 6 mm from 3 cm

∴ 10 mm = 1 cm

∴ 6 mm = 6 ÷ 10 cm = 0.6 cm

0.6 cm from 3 cm

| cm  | mm |
|-----|----|
| 3   | 0  |
| - 0 | 6  |
| 2   | 4  |

⇒ 2 cm 4 mm

| cm  | mm |
|-----|----|
| 3   | 0  |
| - 7 | 5  |
| 2   | 8  |

⇒ 2 cm 8 mm

(c) 567 cm from 7 km

$$\therefore 100 \text{ cm} = 1 \text{ m}$$

$$\therefore 567 \text{ cm} = 567 \div 100 \text{ m} = 5 \text{ m } 67 \text{ cm}$$

| km | m   | cm |
|----|-----|----|
| 7  | 000 | 00 |
| -  | 005 | 67 |
| 6  | 994 | 33 |

$$\Rightarrow 6 \text{ km } 994 \text{ m } 33 \text{ cm}$$

(d)

| m  | cm   |
|----|------|
| 20 | 13   |
| -  | 1845 |
| 18 | 78   |

$$\Rightarrow 18 \text{ m } 78 \text{ cm}$$

(e)

| km | m    |
|----|------|
| 4  | 1014 |
| -  | 3329 |
| 1  | 785  |

$$\Rightarrow 1 \text{ km } 785 \text{ m}$$

(f)

| km | m    |
|----|------|
| 6  | 1114 |
| -  | 2475 |
| 4  | 775  |

$$\Rightarrow 4 \text{ km } 775 \text{ m}$$

## 2. Subtract the following:

(a)

| kg | g    |
|----|------|
| 0  | 1292 |
| -  | 7360 |
| 05 | 665  |

$$\Rightarrow 5 \text{ kg } 665 \text{ g}$$

(b)

| kg | g      |
|----|--------|
| 7  | 111014 |
| -  | 56375  |
| 25 | 775    |

$$\Rightarrow 25 \text{ kg } 775 \text{ g}$$

(c)

| L  | mL      |
|----|---------|
| 1  | 1012910 |
| -  | 13785   |
| 07 | 515     |

$$\Rightarrow 7 \text{ L } 515 \text{ mL}$$

(d)

| L | mL  |
|---|-----|
| 1 | 10  |
| - | 700 |
| 1 | 300 |

$$\Rightarrow 1 \text{ L } 300 \text{ mL}$$

(e)

| m | cm  |
|---|-----|
| 0 | 910 |
| - | 56  |
| 0 | 44  |

$$\Rightarrow 44 \text{ cm}$$

(f)

| m  | cm   |
|----|------|
| 0  | 1513 |
| -  | 870  |
| 07 | 65   |

$$\Rightarrow 7 \text{ m } 65 \text{ cm}$$



## Exercise 11D

### 1. Find the following:

(a) 
$$\begin{array}{r} \text{cm} \quad \text{mm} \\ \textcircled{1} \textcircled{1} \\ 123 \\ \times 6 \\ \hline 738 \end{array}$$

$\therefore 73 \text{ cm } 8 \text{ mm} = 738 \text{ mm}$

(b) 
$$\begin{array}{r} \text{cm} \quad \text{mm} \\ \textcircled{2} \\ 95 \\ \times 5 \\ \hline 475 \end{array}$$

$\therefore 47 \text{ cm } 5 \text{ mm} = 475 \text{ mm}$

(c) 
$$\begin{array}{r} \text{m} \quad \text{cm} \\ \textcircled{5} \textcircled{2} \\ 1630 \\ \times 8 \\ \hline 13040 \end{array}$$

$\therefore 130 \text{ m } 40 \text{ cm} = 13040 \text{ cm}$

(d) 
$$\begin{array}{r} \text{m} \quad \text{cm} \\ \textcircled{3} \textcircled{4} \textcircled{3} \\ 3565 \\ \times 7 \\ \hline 24955 \end{array}$$

$\therefore 249 \text{ m } 55 \text{ cm} = 24955 \text{ cm}$

(e) 
$$\begin{array}{r} \text{km} \quad \text{m} \\ \textcircled{1} \\ 6312 \\ \times 4 \\ \hline 25248 \end{array}$$

$\therefore 25 \text{ km } 248 \text{ m} = 25248 \text{ m}$

(f) 
$$\begin{array}{r} \text{km} \quad \text{m} \\ \textcircled{4} \textcircled{1} \\ 38120 \\ \times 6 \\ \hline 228720 \end{array}$$

$\therefore 228 \text{ km } 720 \text{ m} = 228720 \text{ m}$

### 2. Find the following:

(a) 
$$\begin{array}{r} \text{kg} \quad \text{g} \\ \textcircled{3} \textcircled{6} \\ 4480 \\ \times 8 \\ \hline 35840 \end{array}$$

$\therefore 35 \text{ kg } 840 \text{ g} = 35840 \text{ g}$

(b) 
$$\begin{array}{r} \text{kg} \quad \text{g} \\ \textcircled{2} \textcircled{3} \textcircled{1} \textcircled{3} \\ 73625 \\ \times 6 \\ \hline 441750 \end{array}$$

$\therefore 441 \text{ kg } 750 \text{ g} = 441750 \text{ g}$

(c) 
$$\begin{array}{r} \text{L} \quad \text{mL} \\ \textcircled{3} \textcircled{3} \textcircled{4} \\ 8435 \\ \times 9 \\ \hline 75915 \end{array}$$

$\therefore 75 \text{ L } 915 \text{ mL} = 75915 \text{ mL}$

(d) 
$$\begin{array}{r} \text{L} \quad \text{mL} \\ \textcircled{5} \textcircled{1} \textcircled{5} \textcircled{3} \\ 57275 \\ \times 7 \\ \hline 400925 \end{array}$$

$\therefore 400 \text{ L } 925 \text{ mL} = 400925 \text{ mL}$



## Exercise 11E

1. Find the following:

$$\begin{array}{r}
 \text{cm} \quad \text{mm} \\
 30 \quad 4 \\
 \text{(a) } 9 \overline{) 273 \quad 6} \\
 \underline{-27} \phantom{0} \\
 3 \quad 6 \\
 \underline{-3 \quad 6} \\
 0
 \end{array}$$

$$\therefore 30 \text{ cm } 4 \text{ mm} = 304 \text{ mm}$$

$$\begin{array}{r}
 \text{cm} \quad \text{mm} \\
 54 \quad 3 \\
 \text{(b) } 15 \overline{) 814 \quad 5} \\
 \underline{-75} \phantom{0} \\
 64 \\
 \underline{-60} \\
 4 \quad 5 \\
 \underline{-4 \quad 5} \\
 0
 \end{array}$$

$$\therefore 54 \text{ cm } 3 \text{ mm} = 543 \text{ mm}$$

$$\begin{array}{r}
 \text{m} \quad \text{cm} \\
 18 \quad 76 \\
 \text{(c) } 20 \overline{) 375 \quad 20} \\
 \underline{-20} \phantom{0} \\
 175 \\
 \underline{-160} \\
 15 \quad 2 \\
 \underline{-14 \quad 0} \\
 1 \quad 20 \\
 \underline{-1 \quad 20} \\
 0
 \end{array}$$

$$\therefore 18 \text{ cm } 76 \text{ cm} = 1876 \text{ cm}$$

$$\begin{array}{r}
 \text{m} \quad \text{cm} \\
 86 \quad 16 \\
 \text{(d) } 11 \overline{) 947 \quad 76} \\
 \underline{-88} \phantom{0} \\
 67 \\
 \underline{-66} \\
 1 \quad 7 \\
 \underline{-1 \quad 1} \\
 66 \\
 \underline{-66} \\
 0
 \end{array}$$

$$\therefore 86 \text{ m } 16 \text{ cm} = 8616 \text{ cm}$$

2. Find the following:

$$\begin{array}{r}
 \text{km} \quad \text{m} \\
 43 \quad 373 \\
 \text{(a) } 16 \overline{) 693 \quad 980} \\
 \underline{-64} \phantom{0} \\
 53 \\
 \underline{-48} \\
 5 \quad 9 \\
 \underline{-4 \quad 8} \\
 1 \quad 18 \\
 \underline{-1 \quad 12} \\
 60 \\
 \underline{-48} \\
 12
 \end{array}$$

$$\Rightarrow 43 \text{ km } 373 \text{ m } 12 \text{ cm}$$

$$\begin{array}{r}
 \text{km} \quad \text{m} \\
 93 \quad 842 \\
 \text{(b) } 8 \overline{) 750 \quad 736} \\
 \underline{-72} \phantom{0} \\
 30 \\
 \underline{-24} \\
 6 \quad 7 \\
 \underline{-6 \quad 4} \\
 33 \\
 \underline{-32} \\
 16 \\
 \underline{-16} \\
 0
 \end{array}$$

$$\Rightarrow 93 \text{ km } 842 \text{ m}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 0 \quad 775 \\
 \hline
 \text{(c) } 12 \overline{) 9 \quad 300} \\
 \underline{-8 \quad 4} \phantom{0} \\
 90 \phantom{0} \\
 \underline{-84} \phantom{0} \\
 60 \phantom{0} \\
 \underline{-60} \\
 0
 \end{array}$$

$$\Rightarrow 775 \text{ g}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 50 \quad 500 \\
 \hline
 \text{(d) } 13 \overline{) 656 \quad 500} \\
 \underline{-65} \phantom{00} \\
 6 \quad 5 \phantom{0} \\
 \underline{-6 \quad 5} \\
 000
 \end{array}$$

$$\Rightarrow 50 \text{ kg } 500 \text{ g} = 50500 \text{ g}$$

3. Find the following:

$$\begin{array}{r}
 \text{L} \quad \text{mL} \\
 80 \quad 090 \\
 \hline
 \text{(a) } 7 \overline{) 560 \quad 630} \\
 \underline{-56} \phantom{0} \\
 0 \quad 63 \phantom{0} \\
 \underline{-63} \\
 00
 \end{array}$$

$$\therefore 80 \text{ L } 090 \text{ mL} = 80090 \text{ mL}$$

$$\begin{array}{r}
 \text{L} \quad \text{mL} \\
 160 \quad 200 \\
 \hline
 \text{(b) } 21 \overline{) 3364 \quad 200} \\
 \underline{-21} \phantom{00} \\
 126 \phantom{0} \\
 \underline{-126} \phantom{0} \\
 4 \quad 2 \phantom{0} \\
 \underline{-4 \quad 2} \\
 00
 \end{array}$$

$$\therefore 160 \text{ L } 200 \text{ mL} = 160200 \text{ mL}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 260 \quad 248 \\
 \hline
 \text{(c) } 10 \overline{) 2602 \quad 480} \\
 \underline{-20} \phantom{00} \\
 60 \phantom{00} \\
 \underline{-60} \phantom{00} \\
 2 \quad 4 \phantom{00} \\
 \underline{-2 \quad 0} \\
 48 \phantom{00} \\
 \underline{-40} \\
 80 \phantom{00} \\
 \underline{-80} \\
 0
 \end{array}$$

$$\therefore 260 \text{ kg } 248 \text{ g} = 260248 \text{ g}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 20 \quad 574 \\
 \hline
 \text{(d) } 18 \overline{) 370 \quad 332} \\
 \underline{-36} \phantom{00} \\
 10 \quad 3 \phantom{00} \\
 \underline{-9 \quad 0} \\
 1 \quad 33 \phantom{00} \\
 \underline{-1 \quad 26} \\
 72 \phantom{00} \\
 \underline{-72} \\
 0
 \end{array}$$

$$\therefore 20 \text{ kg } 574 \text{ g} = 20574 \text{ g}$$



## Exercise 11F

1. Length of the first road = 123 km 500 m

Length of the second road = 95 km 410 m

Length of the third road = 76 km 375 m

The total length of the roads

$$= 123 \text{ km } 500 \text{ m} + 95 \text{ km } 410 \text{ m} + 76 \text{ km } 375 \text{ m}$$

$$= 295 \text{ km } 285 \text{ m}$$

|   | km  | m   |
|---|-----|-----|
|   | 123 | 500 |
| + | 95  | 410 |
| + | 76  | 375 |
|   | 295 | 285 |

2. The total distance between Ajay's home and office = 13 km 475 m

Ajay covered a distance by metro = 8 km 580 m

Ajay covered a distance by auto

$$= 13 \text{ km } 475 \text{ m} - 8 \text{ km } 580 \text{ m}$$

$$= 4 \text{ km } 895 \text{ m}$$

|   | km | m   |
|---|----|-----|
|   | 13 | 475 |
| - | 8  | 580 |
|   | 4  | 895 |

3. Vijay runs of a running track = 12 km 864 m

Vijay take rounds of a running track = 8

Length of the running track = 12 km 864 m  $\div$  8

$$= 1 \text{ km } 608 \text{ m}$$

$$= 1608 \text{ m}$$

|    | km | m   |
|----|----|-----|
|    | 12 | 864 |
| 8) | 12 | 864 |
|    | -8 |     |
|    | 4  | 8   |
|    | -4 | 8   |
|    |    | 64  |
|    |    | -64 |
|    |    | 0   |

4. One basket holds of apples = 7 kg 650 g

Another basket holds of apples = 6 kg 450 g

The total weight of apples in two baskets

$$= 7 \text{ kg } 650 \text{ g} + 6 \text{ kg } 450 \text{ g}$$

$$= 14 \text{ kg } 100 \text{ g}$$

|   | kg | g   |
|---|----|-----|
|   | 7  | 650 |
| + | 6  | 450 |
|   | 14 | 100 |

5. Vegetable used in party = 23 kg 380 g

Vegetable found rotten = 2 kg 450 g

Weight of used vegetable = 23 kg 380 g + 2 kg 450 g

$$= 25 \text{ kg } 830 \text{ g}$$

|   | kg | g   |
|---|----|-----|
|   | 23 | 380 |
| + | 2  | 450 |
|   | 25 | 830 |



Total weight of vegetable = 30 kg

Weight of used vegetable = 25 kg 830 g

$$\begin{aligned}\text{Left vegetable} &= 30 \text{ kg} - 25 \text{ kg } 830 \text{ g} \\ &= 4 \text{ kg } 170 \text{ g}\end{aligned}$$

| kg    | g   |
|-------|-----|
| 30    | 000 |
| - 25  | 830 |
| <hr/> |     |
| 04    | 170 |

6. A family consumes of flour in a month = 16 kg 500 g  
 A family consumes of flour in a year = 16 kg 500 g  $\times$  12  
 ( $\because$  1 year = 12 months) = 198 kg

| kg    | g           |
|-------|-------------|
| 16    | 500         |
|       | $\times 12$ |
| <hr/> |             |
| 33    | 000         |
| 165   | 000         |
| <hr/> |             |
| 198   | 000         |

7. Weight of vegetables = 40 kg  
 Number of vendors = 5  
 Vegetable equally divided of each vendor  
 $= 40 \text{ kg} \div 5$   
 $= 8 \text{ kg}$

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

8. A dairy sold of milk in first day = 64 L 550 mL  
 A dairy sold of milk in second day = 79 L 300 mL  
 A dairy sold of milk in third day = 72 L  
 Total sale of milk in three days  
 $= 64 \text{ L } 550 \text{ mL} + 79 \text{ L } 300 \text{ mL} + 72 \text{ L}$   
 $= 215 \text{ L } 850 \text{ mL}$

| L     | mL  |
|-------|-----|
| 64    | 550 |
| + 79  | 300 |
| + 72  | 000 |
| <hr/> |     |
| 215   | 850 |

9. A car holds of petrol = 48 L  
 After two day it holds of petrol = 29 L 580 mL  
 Petrol used of two days = 48 L - 29 L 580 mL  
 $= 18 \text{ L } 420 \text{ mL}$

| L     | mL  |
|-------|-----|
| 48    | 000 |
| - 29  | 580 |
| <hr/> |     |
| 18    | 420 |

10. Capacity of a tank = 800 L  
 Emptied into drums with capacity of each = 50 L  
 Number of drums = 800 L  $\div$  50 L  
 $= 16 \text{ drums}$

$$\begin{array}{r} 16 \\ 50 \overline{)800} \\ \underline{-50} \\ 300 \\ \underline{-300} \\ 0 \end{array}$$

**Maths in Everyday Life**

Observation, Interpersonal skills

Do yourself.

**Apply Your Learning**

Problem-solving, Observation

Rashi used of milk to make dessert = 2 L 175 mL

Rashi used of milk to make tea = 815 mL

Rashi used of total milk = 2 L 175 mL + 815 mL  
= 2 L 990 mL

Rashi bought milk = 4 L 500 mL

Rashi used of total milk = 2 L 990 mL

Left milk = 4 L 500 mL – 2 L 990 mL  
= 1 L 510 mL

| L | mL  |
|---|-----|
| 2 | 175 |
| + | 815 |
| 2 | 990 |

| L | mL   |
|---|------|
| 4 | 500  |
| – | 2990 |
| 1 | 510  |

**Think, Solve and Learn**

Integrate with Science, Observation

Suppose doctor has advised you to take of medicine twice a day = 2 teaspoons

 $\therefore$  1 teaspoon = 5 mL

Used of syrup = 60 days

(i) 16 cl = Not possible

(ii) 200 mL = Not possible

(iii) 12 dL =  $12 \times 100$  mL

$$= 1200 \text{ mL} \div (5 \times 4) \text{ mL}$$

$$= 1200 \text{ mL} \div 20 \text{ mL}$$

$$= 60 \text{ days}$$

(iv) 2 L = Not possible



## 12 Geometry



### Exercise 12A

1. Name the given figures using symbols.

(a) Ray  $\overrightarrow{AB}$

(b) Line  $\overleftrightarrow{XY}$

(c) Line Segment  $\overline{RS}$

(d) Line Segment  $\overline{MN}$

(e) Ray  $\overrightarrow{PQ}$

(f) Line  $\overleftrightarrow{CD}$

2. Draw the following line segments of given lengths.

Do yourself.

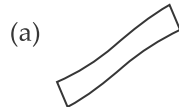


### Exercise 12B

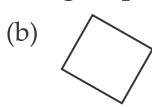
1. Fill in the blanks :

- (a) A line segment starts and **ends** at fixed points.
- (b) A closed figure, **starts** and ends at the same point.
- (c) A triangle has **three** sides and **three** vertices.
- (d) A closed figure made with line segments is called a **polygon**.
- (e) A polygon with four sides is called **quadrilateral**.
- (f) In a rectangle opposite sides are **equal**.
- (g) The point where two sides of a polygon meet is called a **vertices**.
- (h) In a square all the sides are **equal**.

2. Which of the following are polygons?



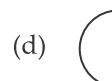
Not a polygon



Polygon

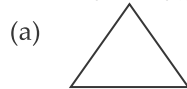


Polygon

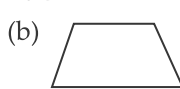


Not a  
polygon

3. Identify the type of polygons.



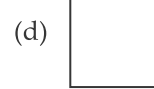
Triangle



Trapezium



Rectangle



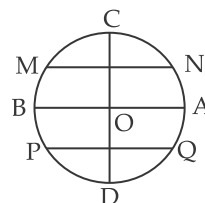
Square



## Exercise 12C

1. From the figure given, name the following.

- (a) Centre of the circle  $O$ .
- (b) Radii of the circle  $OC, OB, OA, OD$ .
- (c) Chords of the circle  $MN, AB, PQ, CD$ .
- (d) Diameters of the circle  $AB, CD$ .



2. Find the diameters of the circles, of the radii are :

Do yourself.

3. Draw circles and measure circumference using a thread for.

Do yourself.

4. Fill in the blanks.

- (a) The diameter of a circle is the **largest** chord.
- (b) A **chord** is line segment joining any two points on the circle.
- (c) The **circumference** is the length of the boundary of the circle.
- (d) The half of the diameter of a circle is the **radius** of the circle.

5. Measure the radius of each circle and write length of the radius and diameter.

Do yourself.



## Exercise 12D

Do yourself.



Maths Fun

Integrate with Arts, Observation, Creativity

Do yourself.

Apply Your Learning

Critical and Logical thinking, Conceptualisation

Do yourself.

Think, Solve and Learn

Problem-solving, Applicative thinking

Do yourself.



# 13

## Perimeter and Area

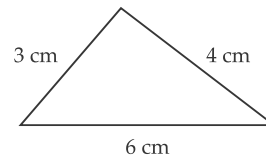


### Exercise 13A

#### 1. Find the perimeter:

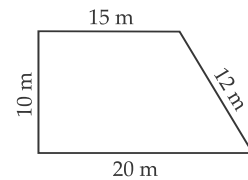
(a) Perimeter of the given figure

$$\begin{aligned} &= 3 \text{ cm} + 4 \text{ cm} + 6 \text{ cm} \\ &= 13 \text{ cm} \end{aligned}$$



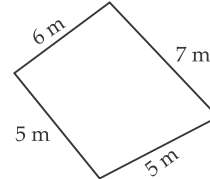
(b) Perimeter of the given figure

$$\begin{aligned} &= 15 \text{ m} + 12 \text{ m} + 10 \text{ m} + 20 \text{ m} \\ &= 57 \text{ m} \end{aligned}$$



(c) Perimeter of the given figure

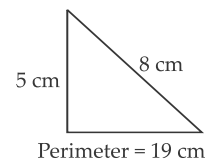
$$\begin{aligned} &= 6 \text{ m} + 7 \text{ m} + 5 \text{ m} + 5 \text{ m} \\ &= 23 \text{ m} \end{aligned}$$



#### 2. Find the missing measurements.

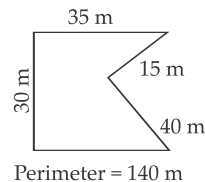
(a) Perimeter of the given figure

$$\begin{aligned} &= \text{Side} + \text{Side} + \text{Side} \\ 19 \text{ cm} &= 5 \text{ cm} + 8 \text{ cm} + \text{Side} \\ 19 \text{ cm} &= 13 \text{ cm} + \text{Side} \\ \text{Side} &= 19 \text{ cm} - 13 \text{ cm} = 6 \text{ cm} \end{aligned}$$

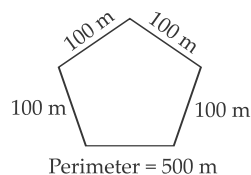


(b) Perimeter of the given figure

$$\begin{aligned} &= 30 \text{ m} + 35 \text{ m} + 15 \text{ m} + 40 \text{ m} + \text{Required side} \\ 140 \text{ m} &= 120 \text{ m} + \text{Required side} \\ \text{Required side} &= 140 \text{ m} - 120 \text{ m} = 20 \text{ m} \end{aligned}$$

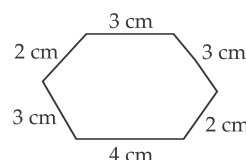


- (c) Perimeter of the given figure  
 $= 100 \text{ m} + 100 \text{ m} + 100 \text{ m} + 100 \text{ m} + \text{Required side}$   
 $500 \text{ m} = 400 \text{ m} + \text{Required side}$   
 $\text{Required side} = 500 \text{ m} - 400 \text{ m}$   
 $= 100 \text{ m}$

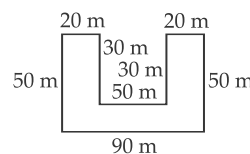


**3. Find the perimeter of the given figures :**

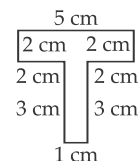
- (a) Perimeter of the given figure  
 $= 3 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} + 2 \text{ cm}$   
 $= 17 \text{ cm}$



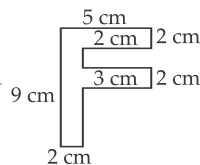
- (b) Perimeter of the given figure  
 $= 20 \text{ m} + 30 \text{ m} + 50 \text{ m} + 30 \text{ m} + 20 \text{ m}$   
 $+ 50 \text{ m} + 90 \text{ m} + 50 \text{ m}$   
 $= 340 \text{ m}$



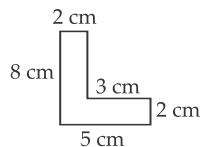
- (c) Perimeter of the given figure  
 $= 5 \text{ cm} + 2 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} + 1 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 2 \text{ cm}$   
 $= 20 \text{ cm}$



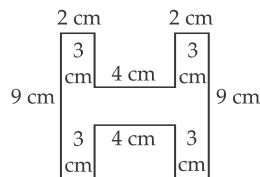
- (d) Perimeter of the given figure  
 $= 5 \text{ cm} + 2 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 2 \text{ cm} + 2 \text{ cm} + 9 \text{ cm}$   
 $= 25 \text{ cm}$



- (e) Perimeter of the given figure  
 $= 2 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 5 \text{ cm} + 8 \text{ cm}$   
 $= 20 \text{ cm}$



- (f) Perimeter of the given figure  
 $= 2 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} + 9 \text{ cm}$   
 $+ 3 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} + 9 \text{ cm} + 2 \text{ cm} + 2 \text{ cm}$   
 $= 46 \text{ cm}$



**4. Find the perimeter of rectangle whose sides are :**

(a) 10 cm and 8 cm

$$\begin{aligned}\therefore \text{Perimeter of rectangle} &= 2 \times (\text{length} + \text{breadth}) \\ &= 2 \times (10 \text{ cm} + 8 \text{ cm}) \\ &= 2 \times 18 \text{ cm} = 36 \text{ cm}\end{aligned}$$

(b) 22 cm and 15 cm

$$\begin{aligned}\therefore \text{Perimeter of rectangle} &= 2 \times (\text{length} + \text{breadth}) \\ &= 2 \times (22 \text{ cm} + 15 \text{ cm}) \\ &= 2 \times 37 \text{ cm} = 74 \text{ cm}\end{aligned}$$

(c) 4 m 50 cm and 2 m 25 cm

$$\begin{aligned}\therefore \text{Perimeter of rectangle} &= 2 \times (\text{length} + \text{breadth}) \\ &= 2 \times (4 \text{ m } 50 \text{ cm} + 2 \text{ m } 25 \text{ cm}) \\ &= 2 \times 6 \text{ m } 75 \text{ cm} = 13 \text{ m } 50 \text{ cm}\end{aligned}$$

**5. Find the perimeter of square whose each side is :**

(a) 10 m

$$\begin{aligned}\therefore \text{Perimeter of square} &= 4 \times \text{side} \\ &= 4 \times 10 \text{ m} = 40 \text{ m}\end{aligned}$$

(b) 12 m 40 cm

$$\begin{aligned}\therefore \text{Perimeter of square} &= 4 \times \text{side} \\ &= 4 \times 12 \text{ m } 40 \text{ cm} \\ &= 49 \text{ m } 60 \text{ cm}\end{aligned}$$

(c) 15 m 50 cm

$$\begin{aligned}\therefore \text{Perimeter of square} &= 4 \times \text{side} \\ &= 4 \times 15 \text{ m } 50 \text{ cm} \\ &= 62 \text{ m}\end{aligned}$$

(d) 17 m 50 cm

$$\begin{aligned}\therefore \text{Perimeter of square} &= 4 \times \text{side} \\ &= 4 \times 17 \text{ m } 50 \text{ cm} \\ &= 70 \text{ m}\end{aligned}$$

**6. Perimeter of a square = 48 cm**

$$\begin{aligned}\therefore \text{Perimeter of square} &= 4 \times \text{side} \\ 48 \text{ cm} &= 4 \times \text{length of side}\end{aligned}$$

$$\text{Length of side} = \frac{48}{4} = 12 \text{ cm}$$

**7. Perimeter of rectangle = 54 cm**

$$\text{Length of rectangle} = 15 \text{ cm, Breadth} = ?$$

$$\therefore \text{Perimeter of rectangle} = 2 \times (\text{length} + \text{breadth})$$

$$54 \text{ cm} = 2 \times (15 \text{ cm} + \text{breadth})$$

$$54 \text{ cm} = 30 \text{ cm} + 2 \text{ breadth}$$

$$2 \times \text{breadth} = 54 \text{ cm} - 30 \text{ cm}$$

$$\text{Breadth} = \frac{14}{2} \text{ cm} = 7 \text{ cm}$$

8. The wall around a square shaped plot of side = 50 m

$$\therefore \text{Perimeter of square} = 4 \times \text{side}$$

$$= 4 \times 50 \text{ m} = 200 \text{ m}$$

The cost of wall around a square shaped plot perimeter = ₹ 2000

$$\text{Cost of wall around} = 200 \text{ m} \times ₹ 2000$$

$$= ₹ 4,00,000$$



### Exercise 13B

1. The side of each square is 1 cm. Find the area of each shaded part. Count more than half of square shaded as 1, half shaded, count it up with another half and ignore less than half shaded.

$$\begin{aligned} \text{(a) Area of shaded part} &= \frac{1}{2} \times 3 \times 3 \\ &= \frac{1}{2} \times 9 = \frac{9}{2} = 4.5 \text{ sq. cm} \end{aligned}$$

$$\text{(b) Area of shaded part} = 8 \times 1 = 8 \text{ sq. cm}$$

$$\text{(c) Area of shaded part} = 18 \text{ cm} \times 1 \text{ cm} = 18 \text{ sq. cm}$$

$$\text{(d) Area of shaded part} = 4 \text{ cm} \times 1 \text{ cm} = 4 \text{ sq. cm}$$

$$\text{(e) Area of shaded part} = 13 \text{ cm} \times 1 \text{ cm} = 13 \text{ sq. cm}$$

$$\text{(f) Area of shaded part} = 18 \text{ cm} \times 1 \text{ cm} = 18 \text{ sq. cm}$$

2. Find area of a rectangle of sides:

- (a) 8 mm and 5 mm

$$\therefore \text{Area of the rectangle} = \text{length} \times \text{breadth}$$

$$= 8 \text{ mm} \times 5 \text{ mm}$$

$$= 40 \text{ mm}^2$$

- (b) 65 cm and 30 cm

$$\therefore \text{Area of the rectangle} = \text{length} \times \text{breadth}$$

$$= 65 \text{ cm} \times 30 \text{ cm}$$

$$= 1950 \text{ cm}^2$$



(c) 50 m and 27 m

$$\begin{aligned}\therefore \text{Area of the rectangle} &= \text{length} \times \text{breadth} \\ &= 50 \text{ m} \times 27 \text{ m} \\ &= 1350 \text{ m}^2\end{aligned}$$

**3. Find area of a square of side.**

(a) 6 mm

$$\begin{aligned}\therefore \text{Area of the square} &= \text{side} \times \text{side} \\ &= 6 \text{ mm} \times 6 \text{ mm} = 36 \text{ mm}^2\end{aligned}$$

(b) 35 cm

$$\begin{aligned}\therefore \text{Area of the square} &= \text{side} \times \text{side} \\ &= 35 \text{ cm} \times 35 \text{ cm} \\ &= 1225 \text{ cm}^2\end{aligned}$$

(c) 60 m

$$\begin{aligned}\therefore \text{Area of the square} &= \text{side} \times \text{side} \\ &= 60 \text{ m} \times 60 \text{ m} \\ &= 3600 \text{ m}^2\end{aligned}$$

**4. Fill in the blanks :**

(a) Area =  $54 \text{ cm}^2$ , Length = 9 cm, Breadth = ?

Area of rectangle = length  $\times$  breadth

$$\begin{aligned}\therefore \quad \text{Breadth} &= \frac{\text{Area}}{\text{Length}} \\ &= \frac{54}{9} \text{ cm} = 6 \text{ cm}\end{aligned}$$

(b) Area =  $210 \text{ cm}^2$ , Length = ? , Breadth = 6 cm

Area of rectangle = length  $\times$  breadth

$$\begin{aligned}\therefore \quad \text{Length} &= \frac{\text{Area}}{\text{Breadth}} \\ &= \frac{210}{6} \text{ cm} \\ &= 35 \text{ cm}\end{aligned}$$

(c) Area =  $340 \text{ cm}^2$ , Length = 20 cm, Breadth = ?

Area of rectangle = length  $\times$  breadth

$$\begin{aligned}\therefore \quad \text{Breadth} &= \frac{\text{Area}}{\text{Length}} \\ &= \frac{340}{20} \text{ cm} \\ &= 17 \text{ cm}\end{aligned}$$

(d) Area =  $900 \text{ cm}^2$ , Length = ? , Breadth = 25 cm

Area of rectangle = length  $\times$  breadth

$$\begin{aligned}\therefore \text{Length} &= \frac{\text{Area}}{\text{Breadth}} \\ &= \frac{900}{25} \text{ cm} \\ &= 36 \text{ cm}\end{aligned}$$

5. Room of length = 12 m

Room of breadth = 8 m

Area of room = length  $\times$  breadth

$$= 12 \text{ m} \times 8 \text{ m} = 96 \text{ m}^2$$

Length of carpet = 8 m

Breadth of carpet = 5 m

Area of carpet = length  $\times$  breadth

$$= 8 \text{ m} \times 5 \text{ m}$$

$$= 40 \text{ m}^2$$

Left uncovered area of the room = Area of room – Area of carpet

$$= 96 \text{ m}^2 - 40 \text{ m}^2$$

$$= 56 \text{ m}^2$$

6. Each side of a square piece of a card board = 50 cm

Area of card board =  $50 \text{ cm} \times 50 \text{ cm} = 2500 \text{ cm}^2$

Each side of a square one piece of a card board = 5 cm

Area of one piece =  $5 \text{ cm} \times 5 \text{ cm} = 25 \text{ cm}^2$

Number of pieces made from the card board =  $\frac{\text{Area of card board}}{\text{Area of one piece}}$

$$= \frac{2500 \text{ cm}^2}{25 \text{ cm}^2} = 100$$



#### Maths in Everyday Life

Observation, Problem-solving

Length of garden = 55 m

Breadth of garden = 45 m

Area of garden = length  $\times$  breadth

$$= 55 \text{ m} \times 45 \text{ m}$$

$$= 2475 \text{ m}^2$$

**Apply Your Learning**

Critical and Logical thinking, Problem-solving

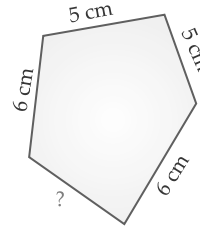
Perimeter of the given figure

$$= 5 \text{ cm} + 5 \text{ cm} + 6 \text{ cm} + 6 \text{ cm} + \text{Required side}$$

$$26 \text{ cm} = 22 \text{ cm} + \text{Required side}$$

$$\text{Required side} = 26 \text{ cm} - 22 \text{ cm}$$

$$= 4 \text{ cm}$$

**Think, Solve and Learn**

Problem-solving, Observation

Side of square field = 160 m

Area of square field =  $160 \text{ m} \times 160 \text{ m}$ 

$$= 25600 \text{ m}^2$$

Everyday run covering rounds of a square field = 8

Total distance covered by everyday =  $25600 \times 8$ 

$$= 204800 \text{ m}^2$$

**14****Data Handling****Exercise 14A**

1. The following pictograph shows the numbers of cakes baked by cake shops in one week.

Using the pictograph answer the followings :

- (a) How many cake baked on Saturday?  $= 5 \times 10 = 50$  cakes  
 (b) On what day maximum cakes were bake? **= Friday**  
 (c) On what day minimum cakes were bake? **= Monday**  
 (d) How many cake baked on Tuesday?  $= 5 \times 10 + 5 = 50 + 5 = 55$  cakes  
 (e) On what day were 50 cakes baked? **= Saturday**

2. Do yourself.



## Exercise 14B

1. The bar charts below show a student's marks in Maths and English tests given on each day of the same week.

Complete the tables with marks secured by the student in each subject using corresponding bar graph.

**MATHS TEST**

| Days  | Mon. | Tue. | Wed. | Thu. | Fri. |
|-------|------|------|------|------|------|
| Marks | 8    | 16   | 8    | 6    | 20   |

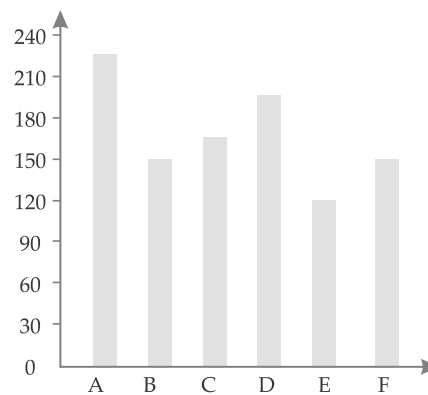
**ENGLISH TEST**

| Days  | Mon. | Tue. | Wed. | Thu. | Fri. |
|-------|------|------|------|------|------|
| Marks | 15   | 6    | 16   | 12   | 8    |

2. The chart given ahead shows the height of students in a class.

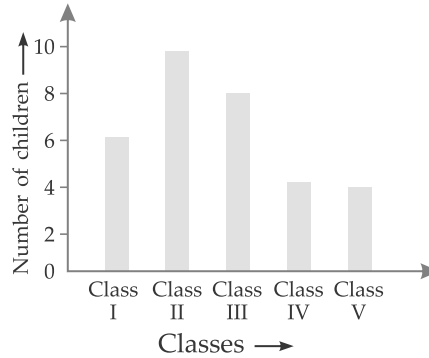
- (a) Who has maximum height? = A  
(b) Which student is the shortest? = E  
(c) What is the height of these students?

- A    **225 cm**  
B    **150 cm**  
C    **165 cm**  
D    **195 cm**  
E    **120 cm**  
F    **150 cm**

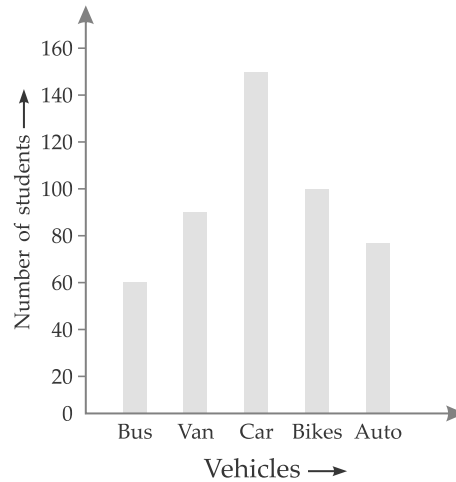


3. Use graph paper to make a bar graph for the information in each of the following.

(a)



(b)



**Maths in Everyday Life**

Observation, Communication

Do yourself.

**Apply Your Learning**

Critical and Logical thinking, Problem-solving, Integrate with Social Science

Do yourself.

**Think, Solve and Learn**

Observation, Critical and Logical thinking

