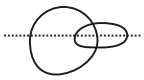
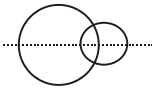
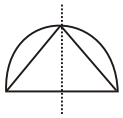
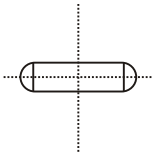
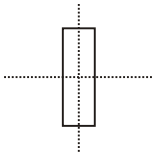
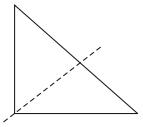
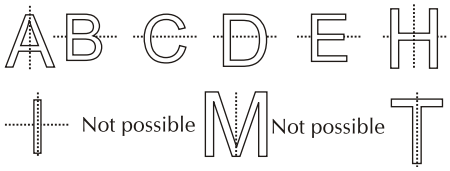
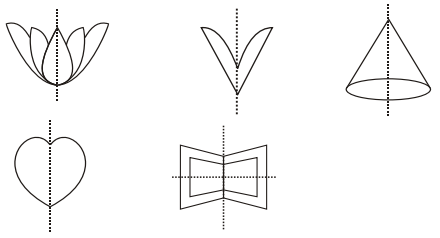
1. (i)  (ii) 

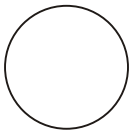
(iii)  (iv) 

(v)  (vi) 

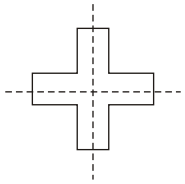
2. 

3. 

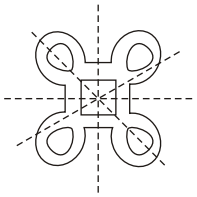
4. (i) Infinite



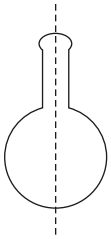
(ii) two



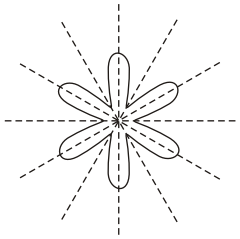
(iii) four



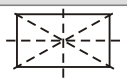
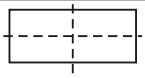
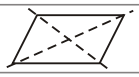
(iv) One



(v) Six



5.

Shape	Figure	No. of line symmetry
Square		4
Rectangle		2
Rhombus		2
Circle		infinite
Equilateral triangle		3

MCQs

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

Mental Maths

1. Name a figure having many lines of symmetry. **Circle**
2. A line dividing a figure in two identical figure is known as **Axis or line of symmetry.**
3. Give two alphabets having mirror reflection or symmetry. **I, A**
4. Is there any English alphabet having three lines of symmetry. **No,**
5. How many lines of symmetry are there in a semicircle. **1 lines of symmetry in a semicircle.**

17 Perimeter And Area

1. (i) Perimeter = (10 + 15) 2
(∴ Perimeter $(l+b)2$)
= 25 × 2 = 50 cm

(ii) Perimeter = (40 + 40) 2
(∴ Perimeter $(l+b)2$)
= 80 × 2 = 160 cm

(iii) Perimeter = (5 + 6 + 7) cm
= 18 cm

(iv) Perimeter = (6 + 6 + 6 + 6 + 6 + 6) cm
= 36 cm

(v) Perimeter = (40 + 25 + 50 + 35) cm
= 150 cm

(vi) Perimeter = (2 + 2 + 15 + 2 + 8 + 8 + 2 + 15 + 2 + 2 + 10)
= 68 cm

2. (i) Side of square = 15 cm
Perimeter of square = 4 × side
= 4 × 15
= 60 cm.

(ii) Side = 27 cm
Perimeter of square = 4 × Side
= 4 × 27 = 108 cm

(iii) Side = 4.5 cm
Perimeter of square = 4 × side
= 4 × 4.5
= 15 cm.

(iv) Side = 2.7 m
Perimeter of square = 4 × side
= 4 × 2.7 m= 10.8 m

(v) Side = 12.52 m
Perimeter of square = 4 × side
= 4 × 12.52 m
= 50.08 m

3. (i) l = 12 cm b = 5 cm
Perimeter of Rectangle = $2(l+b)$
= 2[12 + 5]
= 2 × 17= 34 cm.

(ii) l = 17 cm b = 3 cm
Perimeter of Rectangle = $2(l+b)$
= 2[17 + 3]
= 40 cm

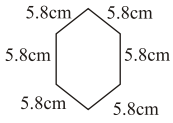
(iii) l = 4.5 cm b = 2 cm
Perimeter of Rectangle = $2(l+b)$
= 2[4.5 + 2]
= 13 cm

iv) l = 17.5 cm b = 6 cm
Perimeter of Rectangle = $2(l+b)$
= 2(17.5 + 6)
= 2(23.5) = 47 cm

(v) l = 19.5 cm b = 4.5 cm
Perimeter of Rectangle = $2(l+b)$
= 2(19.5 + 4.5)
= 2(24)
= 48 cm.

(vi) l = 25 m b = 6.4 m
Perimeter of Rectangle= $2(l+b)$
= 2(25 + 6.4)
= 2(31.4)
= 62.8 m

4. Perimeter of hexagon
= 6 × (5.8) m
= 34.8 m



5. Length of rectangle = 12 cm
Breadth of rectangle = 5 cm
Perimeter of Rectangle = $2(l+b)$
= 2(12 + 5)
= 2 × 17
= 34 cm.

6. Perimeter of rectangular card = 36 cm
length of rectangular card = 12 cm
∵ Perimeter of Rectangle = $2(l+b)$

$\therefore \quad 36 = 2(12 + b)$

$\frac{36}{2} = 12 + b$

$18 = 12 + b$

$18 - 12 = b$

$6 \text{ cm} = b$

$\therefore$ Breadth of rectangular card = 6 cm.

7. Perimeter of Square park $= 4 \times$ side

$= 4 \times 124$

fence required $= 496$ m

$\therefore$ cost of fencing $= ₹\ 25 \times 496$

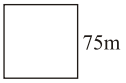
$= ₹\ 12400$

8. distance walked by Rani in one round

= Perimeter of Square

$= 4 \times$ side

$= 4 \times 75 = 300$ m



distance walked by Rani in 2 round

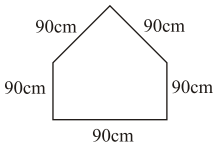
$= 300 \times 2 = 600$ m.

9. Perimeter of Pentagon

$= 5 \times$ Side

$= 5 \times 90$

$= 450$ m



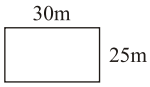
10. Distance moved by Prakash in one round

$= 2(l + b)$

$= 2(30 + 25)$

$= 2(55)$ m

$= 110$ m



distance moved by Prakash $= 110 \times 2$

$= 220$ m

Distance moved by Billu in one round

$= 4 \times$ Side

$= 4 \times 40 = 160$ m

Distance moved by Billu in 3 round

$= 3 \times 160$ m

$= 480$ m

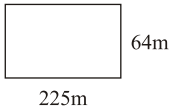
$\therefore$ Billu moved more distance than Prakash by $(480 - 220) = 260$ m.

11. Perimeter of rectangular garden

$= 2(l + b)$

$= 2(225 + 64)$

$= 2(289)$ m



$\therefore$ fence required $= 578$ m

Cost of fence $= ₹\ (20 \times 578)$

$= ₹\ 11560$

12.

S. No.	Length	Breadth	Perimeter
(i)	12 cm	**7 cm**	38 cm
(ii)	**25 cm**	10 cm	70 cm
(iii)	36.8 cm	**23.2 cm**	120 cm
(iv)	70	25 cm	**190 cm**
(v)	**58 cm**	12 cm	140 cm

Exercise 17.2

2. (i) Side of square = 2 m

Area of square = Side × Side

$= 2 \times 2$

$= 4 \text{ m}^2$

(ii) Side = 5.5 cm

Area of square = side × side

$= 5.5 \times 5.5$

$= 30.25 \text{ cm}^2$

(iii) Side of square = 9.2 cm

Area of square

= Side × Side

$= 9.2 \times 9.2$

$= 84.64 \text{ cm}^2$

(iv) Side of square = 36 mm

Area of square = Side × Side

$= 36 \times 36$

$= 1296 \text{ mm}^2$

(v) Side of square = 27 cm

Area of square = Side × Side

$= 27 \times 27 = 729 \text{ cm}^2$

2. (i) $l = 5$ cm $b = 2$ cm

Area of Rectangle $= l \times b$

$= 5 \times 2$

$= 10 \text{ cm}^2$

(ii) $l = 5.4$ cm $b = 2.5$ cm

Area $= l \times b$

$= 5.4 \times 2.5$

$= 13.5 \text{ cm}^2$

(iii) $l = 6$ cm $b = 3$ cm

Area $= l \times b$

$= 6 \times 3 = 18 \text{ cm}^2$

3. Number of tiles $= \dfrac{\text{Area of floor}}{\text{Area of one tile}}$

$= \dfrac{3744}{72}$

number of tiles = 52

4. Area of square wall $= \dfrac{\text{total cost}}{\text{cost/m}^2}$

$= \dfrac{3456}{24}$

Side × Side = 144

Side × Side = 12 × 12

∴ Side of square wall = 12 m.

5. Area of floor of a hall $= l \times b$

$= 18 \times 12\,\text{m}^2$

$= 216\,\text{m}^2$

Cost of flooring $= 216 \times 52$

$= ₹\ 11232$

6. length of marble slab = 0.75 m

breadth of marble slab = 0.50 m

Area of Marble slab $= 0.75 \times 0.50$

$= 0.375$

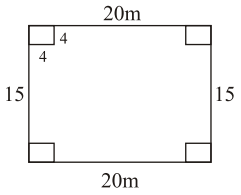
Number of slabs $= \dfrac{\text{Area of floor}}{\text{Area of one slab}}$

$= \dfrac{9}{0.375}$

$= \dfrac{9000}{375}$

number of slabs = 24.

7.



Area of garden $= 20 \times 15$

$= 300\,\text{m}^2$

Area of flower bed $= 4 \times 4$

$= 16\,\text{m}^2$

Area of 4 flower bed $= 4 \times 16$

$= 64\,\text{m}^2$

Area of remaining part of garden

$= 300 - 64$

$= 236\,\text{m}^2$.

8. Area of floor $= l \times b$

$= 3 \times 4\,\text{m}^2$

$= 12\,\text{m}^2$

Side of square tile = 0.5 m

Area of square tile = 0.5 × 0.5

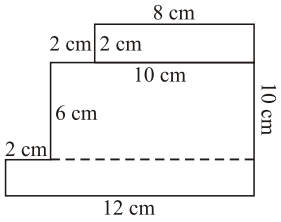
= 0.25

Number of tiles $= \dfrac{\text{Area floor}}{\text{Area of one tile}}$

$= \dfrac{12}{0.25} = \dfrac{1200}{25}$

number of tiles = 48.

9.



(i) Area of rectangle

$'A' = (8 \times 2)\,\text{cm}^2 = 16\,\text{cm}^2$

Area of rectangle

$'B' = (10 \times 6)\,\text{cm}^2 = 60\,\text{cm}^2$

Area of rectangle

$'C' = (12 \times 2)\,\text{cm}^2 = 24\,\text{cm}^2$

Total area of figure (i)

$= (16 + 60 + 24)\,\text{cm}^2$

$= 100\,\text{cm}^2$

(ii) Area of rectangle

$'A' = (2 \times 2)\,\text{cm}^2 = 4\,\text{cm}^2$

Area of rectangle

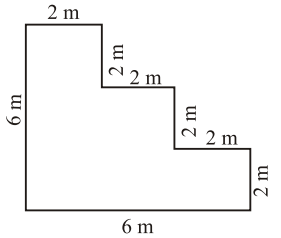
$'B' = (4 \times 2)\,\text{cm}^2 = 8\,\text{cm}^2$

Area of rectangle

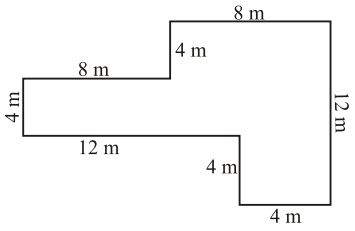
$'C' = (6 \times 2)\,\text{cm}^2 = 12\,\text{cm}^2$

Total area of figure (ii)

$= (4 + 8 + 12)\,\text{cm}^2 = 24\,\text{cm}^2$



(iii) Area of rectangle
$'A' = 8 \times 4\,\text{cm}^2 = 32\,\text{cm}^2$
Area of rectangle
$'B' = 4 \times 8\,\text{cm}^2 = 32\,\text{cm}^2$
Area of rectangle
$'C' = 4 \times 12\,\text{cm}^2 = 48\,\text{cm}^2$
Total area of figure (iii)
$= (32 + 32 + 48)\,\text{cm}^2$
$= 112\,\text{cm}^2$



MCQs

1. (a) **2.** (b) **3.** (b) **4.** (c) **5.** (a)

Mental Maths

1. (i) To put tiles on the floor, you will need **Area** of floor.
(ii) To put fence around a field, you will need **Perimeter**
(iii) The perimeter of a square = **Side** × 4.
(iv) The perimeter of a rectangle $= 2 \times (l + b)$.
(v) The perimeter of a square is 48 cm. Therefore its side = **12 cm**

2. Area is increased by four time original.

3. Area of square = $6 \times 6\,\text{cm}^2 = 36\,\text{cm}^2$
Area of rectangle = $6 \times 4\,\text{cm}^2 = 24\,\text{cm}^2$
$36 > 24$ area of square is greater than rectangle.

4. Perimeter = (6 + 8 + 8) = 22 cm

18 Data Handling

1. **(i) Statistics :** The process of collection of data and interpreting it to draw inferences.
(ii) Observation : When a entry is a numerical fact it is called an observation.
(iii) Raw data : A collection of observations collected initially is called raw data.
(iv) Range : The difference between the highest and the lowest values of the observation.
(v) Arrayed data : Ascending or descending order of data is called arrayed data.
(vi) Frequency : The number of particular data is called frequency.

2.

Number of children	Tally mark	Frequency
2	𝍸 ||	7
3	𝍸 |	6
4	||	2
5	𝍸	5
		20

3.

Wages	Tally mark	Frequency
50	𝍸 |	6
55	𝍸 |	7
60	𝍸 𝍸 |	11
65	𝍸 ||||	9
70	𝍸 ||	7
		40

(i) Maximum wage paid is ₹ 70
7 workers paid maximum wage.
(ii) 13 workers get wage less than 60.
(iii) 16 workers get wage more than 60.

4.

Marks	Tally mark	Frequency
40	|||	3
41	𝍸 |	6
42	𝍸 |	6
43	𝍸	5
44	𝍸 ||	7
45	|||	3
46	|||	3
47	|	1
		35

(i) highest marks is 47 and only one student got it.

(ii) minimum score is forty and three students got it.

(iii) 4 students got more than 45 marks.

Exercise 18.2

1. (i) Maximum watches were manufactured in Wednesday.

(ii) Minimum watches were manufactured in Thursday.

(iii) Number of watches manufactured by in company.

$= 6 \times 50 + 4 \times 50 + 7 \times 50 + 3 \times 50 + 5 \times 50 + 6 \times 50$

$= 300 + 200 + 350 + 150 + 250 + 300$

$= 1550$

(iv) Number of watches produced on Friday $= 5 \times 50 = 250$

Number of watches produced on Saturday $= 6 \times 50 = 300$

Saturday were produced 50 more watches.

3. (i) 21 bulbs were sold on Friday.

(ii) On Sunday maximum number of bulbs were sold.

(iii) Bulb sold on Sunday $= 3 \times 9 = 27$

Total Sale on Sunday $= 27 \times 30$

$= ₹\ 810$

(iv) Total bulb sold in the week

$= 43 \times 3 = 129$

Total sale of the week $= 30 \times 129$

$= ₹\ 3870$

3.

City	= 400 bicycles
Delhi	🚲 🚲 🚲
Mumbai	🚲 🚲 🚲 🚲 🚲
Kolkata	🚲 🚲
Bangalore	🚲 🚲 🚲 🚲 🚲 🚲
Chandigarh	🚲 🚲 🚲 🚲 🚲
Lucknow	🚲 🚲 🚲 🚲

4.

Jan	🛍 🛍 🛍 🛍
Feb	🛍 🛍 🛍 🛍 🛍 🛍
March	🛍 🛍 🛍 🛍 🛍 🛍 🛍 🛍
April	🛍 🛍 🛍
May	🛍 🛍 🛍 🛍 🛍 🛍
June	🛍 🛍 🛍 🛍 🛍
	🛍 = 10 bulbs

MCQs

1. (c) **2.** (b) **3.** (a) **4.** (b)

1. (i) Information given by bar graph that most popular game among the school students.

(ii) Cricket is played by maximum number of students.

(iii) Volleyball is played by minimum number of students.

(iv) 20 students like to play volleyball.

(v) $\frac{\text{Cricket}}{\text{hockey}} = \frac{60}{30} = \frac{2}{1} = 2:1.$

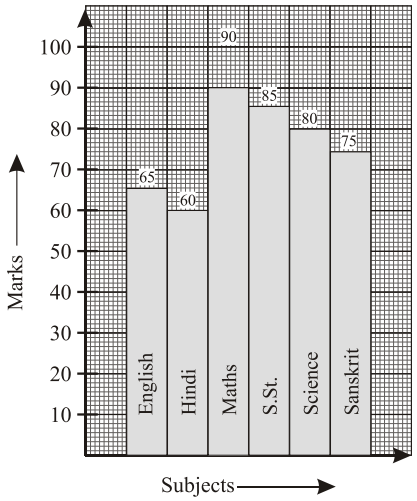
2. (i) Bar graph shows the number of student who were absent on Saturday from class 6 to 10.

(ii) Vertical axis denotes number of student and horizontal axis denotes classes.

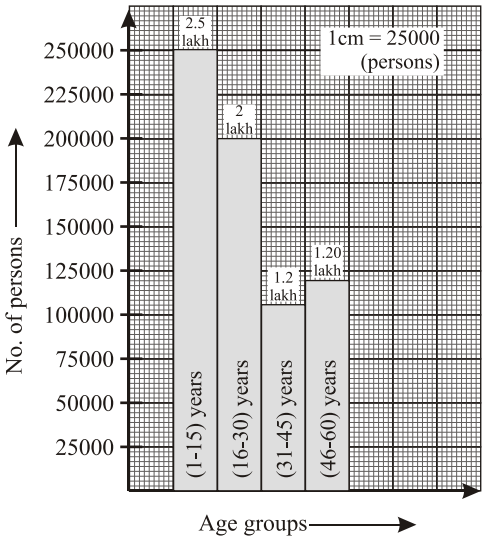
(iii) In class VII maximum number of student are absent they are 8.

(iv) In classes IX and X absence is 4.

3.



4.



MCQs

1. (a) **2.** (a) **3.** (c) **4.** (c)

Mental Maths

1. Graphs give as a general impression about the data at a **glance.**
2. In a bar graph, the bars are equal width but their heights or lengths are **different.**
3. Bar graphs are usually **vertically** but they can also be drawn **horizontal**.
4. Drawing conclusions from a bar graph is called **uniform** a bar graph.

□