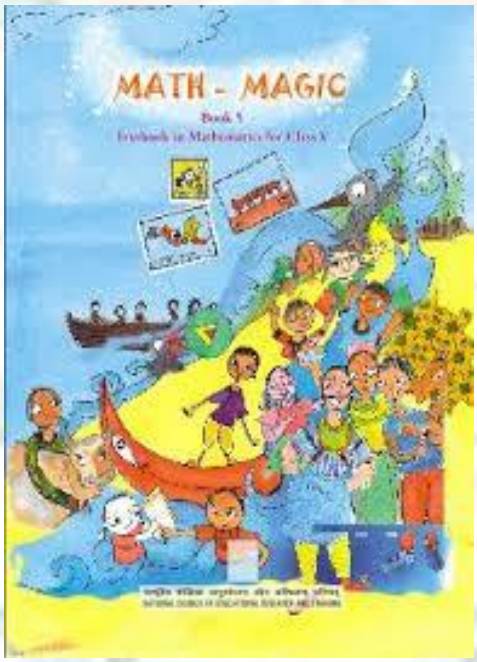
पुजना International School

Shree Swaminarayan Gurukul, Zundal

Class -V

Mathematics

Study materials

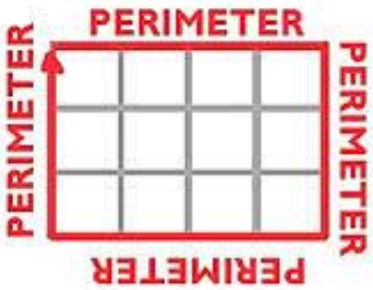


Ch-11 Area and it's boundary

❖ **Summary:**

- Introduction.
- Find the perimeter (by figure)
- Fill in the blanks
- Find the missing length (with help of perimeter)
- Word problem
- Activity

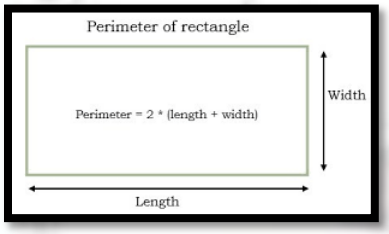
❖ **Introduction:**



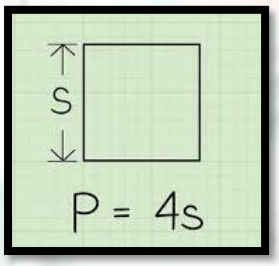
- **Define:**

➢ **Perimeter:** The total length of all the line segments of a closed figure is called its perimeter.

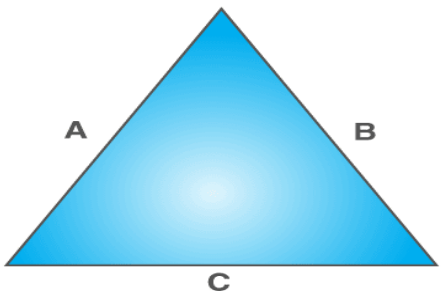
- Perimeter of rectangle= 2(length + breadth)
  = 2(l + b)



- Perimeter of square = 4×length= 4×l

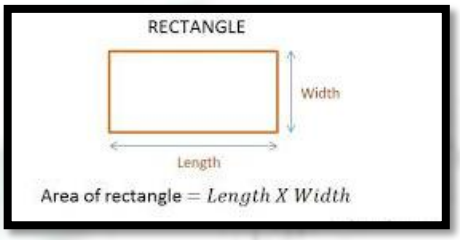


- Perimeter of triangle = sum of three sides.
- If the triangle is an equilateral (A triangle whose all sides are of equal in length).
  formula: 3 × sides

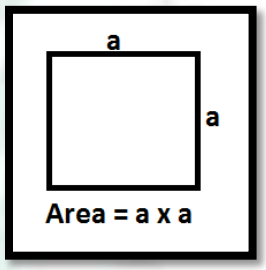


➢ **Area:** The region enclosed between boundaries of a figure.

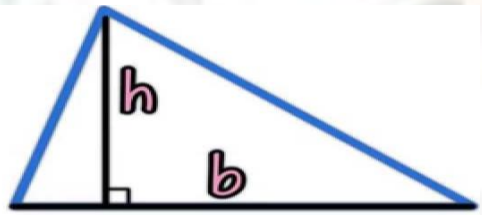
- Area of rectangle = Length × Breadth



- Area of square = length × Length

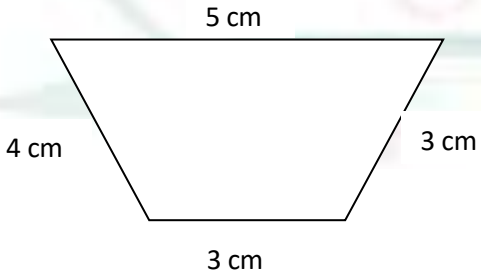


- Area of a triangle = $\frac{1}{2}$ × height × base.



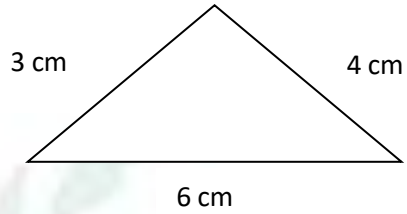
❖ **Find the perimeter irregular figure:**

1)



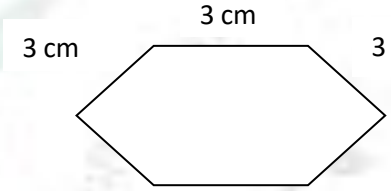
5 cm + 4 cm+ 3 cm + 3 cm = **15 cm**

2)



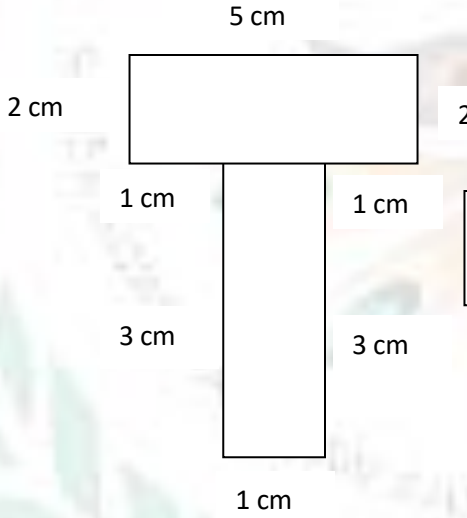
3 cm + 4 cm + 6 cm = **13 cm**

3)



3 cm + 3 cm + 3 cm + 3 cm + 3 cm + 3 cm = **18 cm**

4)



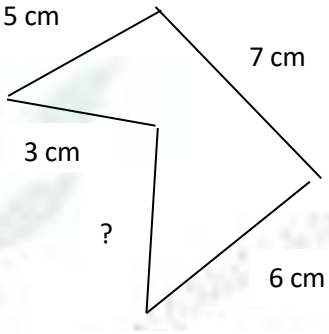
5 cm + 2 cm + 2 cm + 1 cm + 1 cm + 3 cm + 3 cm + 1 cm = **18 cm**

❖ **Fill in the blanks:**

1) The distance around a square field can be calculated using formula **4 × length**
2) **Area** is region enclosed between the boundaries of a figure.
3) Area of triangle $=\frac{1}{2}\times$ **height × base**
4) The measurement of length and breadth is needed to calculate the area of a **rectangle.**
5) A rectangle plot is 25 m × 15 m in dimensions. The total wire needed to fence around it is **80 m.**

❖ **Find the missing length (with help of perimeter):**

1)



Perimeter = 25 cm

Solution:

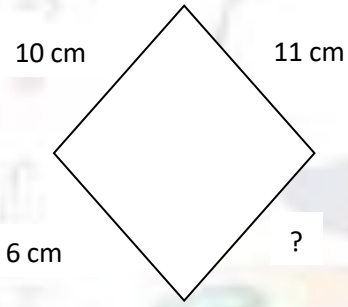
5 cm + 7 cm + 6 cm + 3 cm + x = 25 cm

21 cm + x = 25 cm

X = 25 – 21

X = 4 cm

2)



Perimeter = 32 cm

Solution:

10 cm + 11 cm + 6 cm + x = 32 cm

27 cm + x = 32 cm

X = 32 cm – 27 cm

X = 5 cm

❖ **Word problems:**

1) **The area of rectangle is 225 sq m. If the width of it rectangle is 9 m. what is the length of a rectangle?**

Solution: here, area of rectangle = 225 sqm

Width = 9 m

Length =?

$$\text{Length} = \frac{\text{area of rectangle}}{\text{Width}}$$

$$= \frac{225}{9}$$

= 25 m

Length = 25 m

2) **The area of rectangle is 84 sq m. If the length of it rectangle is 12 m. what is the width of a rectangle?**

Solution: here, area of rectangle = 84 sq m
Length = 12 m
Width =?

$$\text{Width} = \frac{\text{area of rectangle}}{\text{Length}}$$
$$= \frac{84}{12}$$
$$= 7 \text{ m}$$

Width = 7 m

3) **The area of rectangle is 375 sq m. If the length of it rectangle is 15 m. what is the width of a rectangle?**

Solution: here, area of rectangle = 375
Length = 15 m
Width =?

$$\text{Width} = \frac{\text{area of rectangle}}{\text{Length}}$$
$$= \frac{375}{15}$$
$$= 25 \text{ m}$$
Width = 25 m

❖ **Activity:**

- **Find the area of postcard, stamps and belt.**