Ch-3 How many square?

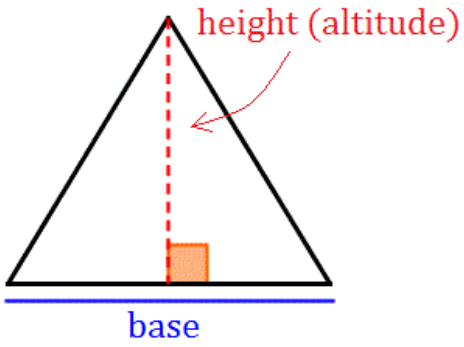
❖ Summary :

- Introduction
- Find out the perimeter of the shape given below
- Find the perimeter
  i. Rectangle
  ii. Square
  iii. Triangle
- Find the area
  i. Rectangle
  ii. Square
  iii. Triangle
- Problem sums
- Activity

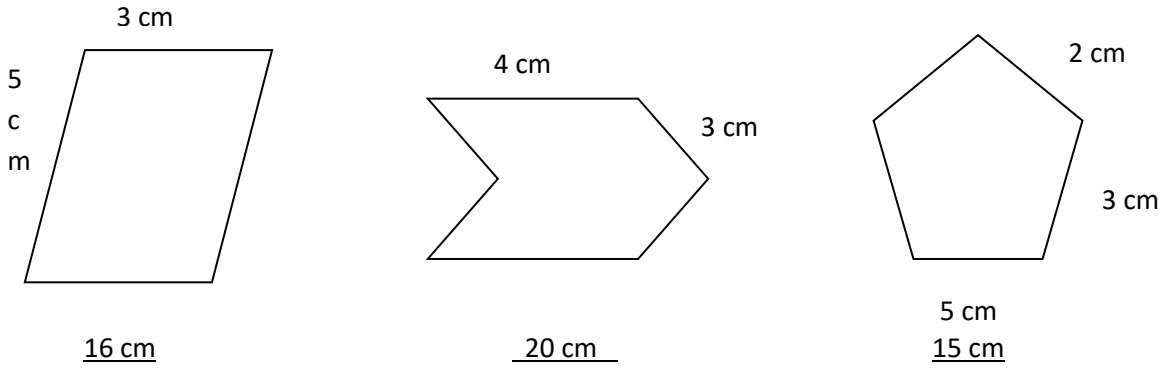
❖ Introduction:

- The perimeter is the distance around the edge of a shape.
- The area is the amount of surface covered by a shape.
- Area is measured in square units, for example: cm^2
- **Formulas of perimeter and area :**
  a. Perimeter of rectangle= 2(length + breadth) = 2(l + b)
  Perimeter of square = 4×length= 4×l
  Perimeter of triangle= Sum of three sides

  b. Area of rectangle = Length × Breadth
  Area of square = length × Length
  Area of triangle= $\frac{1}{2}$ × altitude × base



❖ Find out the perimeter of the shape given below :



16 cm 20 cm 15 cm

a) Which figure has greatest (maximum) perimeter? **2nd**

b) Which figure has least (minimum) perimeter? **3rd**

c) What is the difference between the 1st and 2nd figure? **4 cm**

❖ **Find the perimeter :**

a) Length = 4 cm , breadth = 2cm

Solve: perimeter of rectangle = 2(l + b)
= 2(4 + 2)
=2(6)
=12 cm

b) Length = 3cm

Solve: perimeter of square = 4 × l
= 4×3
= 12 cm

c) Sides= 5 cm, 3cm,4cm

Solve: perimeter of triangle= sum of three sides
=5cm +3cm+4cm
=12 cm

❖ **Find the area:**

a) Length =5cm, breadth=3cm

Solve: area of rectangle = l × b
=5 × 3
=15 cm^2

b) length=6cm

Solve: area of square = l × l
= 6 × 6
=36 cm^2

c) Altitude = 6cm , Base = 8cm

Solve: area of triangle = $\frac{1}{2}$ × altitude × base
= $\frac{1}{2}$ × 6 × 8
= 24 cm^2

d) Altitude = 5cm , Base = 10cm

Solve: area of triangle = $\frac{1}{2}$ × altitude × base

$$= \frac{1}{2} \times 5 \times 10$$
$$= 25 \text{ cm}^2$$

❖ **Problem sum :**

a) **The perimeter of a rectangle field is 18 cm; its breadth is 2cm find the length of the field?**

Solve: perimeter = 18cm, breadth = 2cm, length =?

Perimeter of rectangle= 2(l+ b)

$$18 = 2(l+2)$$

$$\frac{18}{2} = l + 2$$

$$9-2 = l$$

$$l = 7\text{cm}$$

Length of a field is 7cm

b) **The perimeter of a square field is 200m. Find the area of field?**

Solve: perimeter = 200m, length =?

Perimeter of a square $= 4 \times l$

$$200 = 4 \times l$$

$$\frac{200}{4} = l$$

$$L = 50 \text{ m}$$

Area of a square = length × length

$$= 50 \times 50$$

$$= 2500 \text{ m}^2$$

Area of square field is 2500 m^2

c) **A classroom black board is 75 cm long and 12 cm wide. Find the perimeter of black board?**

Solve: length =75cm, breadth =12 cm

Perimeter of a board= 2(l + b)

$$= 2(75 + 12)$$
$$= 2(87)$$
$$= 174 \text{ cm}$$

d) A carpet is 75 cm long and 80 cm wide. Find its area and perimeter.

Solve: length = 75 cm, breadth = 80 cm

Perimeter of carpet = 2(l + b)

= 2(75+80)

=2(155)

= 310 cm

Area of carpet = l × b

=75 × 80

=6000 cm^2

❖ **Activity:**

Paste different size of stamps in grid (any 5) (for example text book page no: 35)