

7th - Mensuration I



A. Perimeter

Perimeter of a rectilinear plane figure is the sum of all its sides. Thus

Perimeter of a triangle = sum of all sides

Perimeter of a rectangle = 2 (length + breadth)

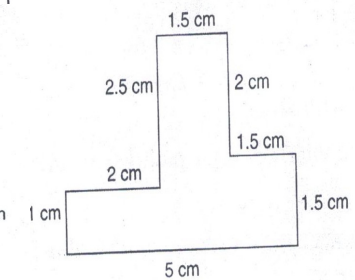
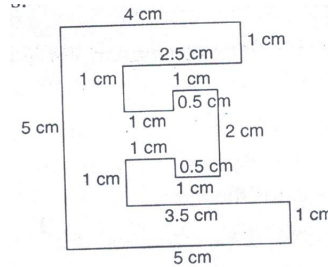
Perimeter of a square = 4 (side)

1. Find the perimeter of a square with side 8.9 cm.

2. Find the perimeter of each of the following figures. All dimensions are given in centimeters.

3. Find the perimeter of the figures

4. The perimeter of ΔABC is 62 cm. its side AB, BC and AC are respectively 19 cm, 23cm and $(x+5)$ cm. find the value of x.



5. The perimeter of a rectangle is 91 cm. Its length is $(2x-1)$ cm and breadth is $(x+9)$ cm. Find its length and breadth.

B. Circumference (perimeter) of a circle

The perimeter of a circle or the length of its boundary is called circumference. Circumference of a circle is approximately 3 times its diameter. Actually, the perimeter and diameter of a circle bears a constant ratio, i.e.

$$\frac{\text{circumference}}{\text{diameter}} = \text{constant} = \pi$$

1. Find the circumference of a circle whose radius is 21 cm.

2. Find the radius of a circular field whose circumference measures 2.2km.

3. The minute hand of a clock is 15 cm long. How far does the tip of the minute hand move in 1 hour?

4. A piece of wire in the form of a rectangle measure 52 cm-x-36 cm. it is cut at one place and bent in the shape of a circle. Find the radius of this circle.

5. A circular pond has a 90 cm wide footpath along its edge. A man walks around the outer edge of the footpath with 65.94 cm long steps. He makes a full round in 400 steps. What is the radius of the pond? (take $\pi = 3.14$)

6. A circular road runs around a circular garden. If the circumference of the outer circle and the inner circle are 110 m and 88 m, find the width of the road.

C. Area

Area of a rectangle = length x breadth

$$\text{Length of a rectangle} = \frac{\text{area}}{\text{breadth}}$$

$$\text{Breadth of a rectangle} = \frac{\text{area}}{\text{length}}$$

Area of a square = side x side = $(\text{side})^2$

Note: unit of area is 1 sq cm which is the area of a square of side 1 cm.

D. Area Of 4-Walls of A Room



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Area of 4 - walls of a room = 2 (length ÷ breadth) x height

1. A ball is 7.2 cm long and 6.3 m wide. Its floor is to be covered with square marble slabs. The side of each slab is 30 cm. find the number of slabs required to cover the floor. If each slab costs Rs 4, find the cost of the slabs.
2. A room is 5.1 m long and 3.9 m wide. It has 2 doors each 1m x 2.5m and 2 windows each 1.5m x 1.8m. Find the cost of white washing its walls at the rate of Rs. 3 per square meter if the walls are 3 m high.

