Cosmo School

Class-5

Subject-Mathematics

Chapter-11(Measurement)

Lecture-11

Creative Question

1. The length of a rectangular field is 90 meters and the area is 3600 sq meters.

a. **What is the width of the field?**
b. **What will its area be if the length of the field is increased by 2 meters?**

Solution:

a) Given,

Length = 90 m

Area = 3600 Sq. m

We know,

Width = Area ÷ Length

= (3600 ÷ 90) m

= 40 m

Ans: 40 m.

b) If the length of the field is increased by 2m then,

Length = (90 + 2) m = 92 m

From 'a' we get, width = 40 m

We know,

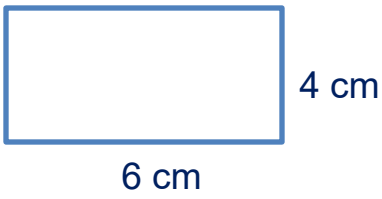
Area = Length × width

= (92 × 40) Sq. m.

= 3680 Sq. m.

Ans: 3680 Sq. m.

2.



a. **What is the area of above figure?**
b. **Divide the figure into 2 triangle and find out the area of one triangle.**
c. **If extend length 2 cm and breadth 1 cm of the figure, what will be the area.**

Solution:

a) Given,

Length = 6 cm

Width = 4 cm

We know,

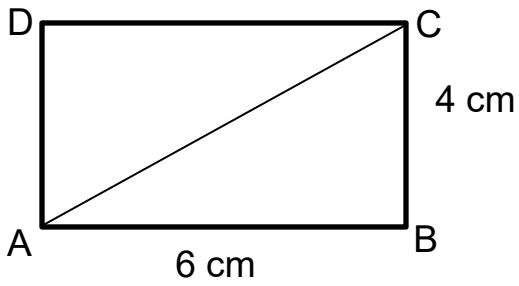
Area = Length × width

= (6 × 4) Sq. cm.

= 24 Sq. cm.

Ans: 24 Sq. cm.

b)



If we draw a diagonal AC then we'll get two triangle. Here, ABC and ADC are two triangle.

For triangle ABC,

Base = 6 cm

Height = 4 cm

We know,

$$\text{Area} = \frac{\text{Base} \times \text{Height}}{2}$$

$= \frac{6 \times 4}{2}$ Sq. cm.

= 12 Sq. cm.

Ans : 12 Sq. cm.

c) If extend length 2 cm and breadth 1 cm of the figure then,

Length = (6 + 2) cm = 8 cm

Width = (4 + 1) cm = 5 cm

We know,

Area = Length × width

= (8 × 5) Sq. cm.

= 40 Sq. cm.

Ans: 40 Sq. cm.

3. A rectangular region is formed by 2 adjoining and non over lapping triangular regions of the same size the length of the rectangular is 16 m and breadth is 12 m.

a. **What is the area of the rectangular region?**
b. **What is the area of the each triangular region?**
c. **If the length of the rectangular region is 2 m extended, what will be the area of the region?**

Solution:

a) Given,

Length = 16 m

Width = 12 m

We know,

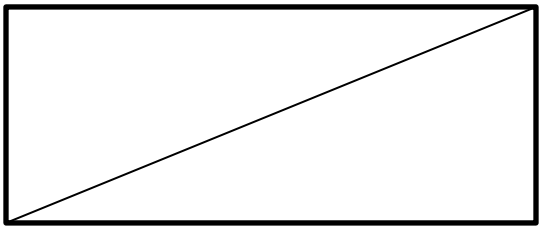
Area = Length × width

= (16 × 12) Sq. m.

= 192 Sq. m.

Ans: 192 Sq. m.

b) A diagonal of a rectangle divides the rectangle equally in to two triangles.



Here,

Base = 16 m

Height = 12 m

We know,

$$\text{Area} = \frac{\text{Base} \times \text{Height}}{2}$$

$$= \frac{16 \times 12}{2} \text{ Sq. m.}$$

= 96 Sq. m.

Ans: 96 Sq. m.

c) If the length of the rectangular region is 2 m extended,

Length = (16 + 2) m = 18 m

Width = 12 m

We know,

Area = Length × width

= (18 × 12) Sq. m.

= 216 Sq. m.

Ans: 216 Sq. m.

Exercise (Do Yourself)

1. The width of a rectangular shape is 40 cm and the length is 3 times more than the width.
   a. What is the area of the shape?
   b. If the length is increased by 10 cm, calculate the area of the shape.

2. The length of a rectangular pond is 96 meters, and the width is 60 meters.
   a. What is the area of the pond?
   b. How many meters in width need to be extended to make the pond square?
   c. What will the area be if the length of the pond is lessened 16 meters?

3. The area of a rectangular field is 336 sq meter. The length of the field is 2100cm.
   a. How many meters is the breadth of the field?
   b. If we let the length of this rectangular field as 1 arm of a square, what will be the area?
   c. If the area of the field is not changed and the length is 42 meters, what will be breadth?