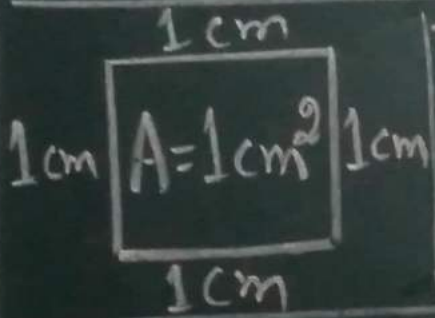


CLASS: 4  
MATHS  
VIDEO-2

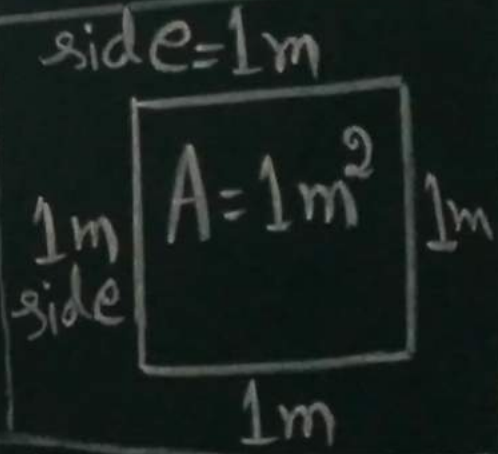
Area: → The amount of surface enclosed within the boundary of a plane figure is called its area.

Units of Area: → Area is expressed in square units of length

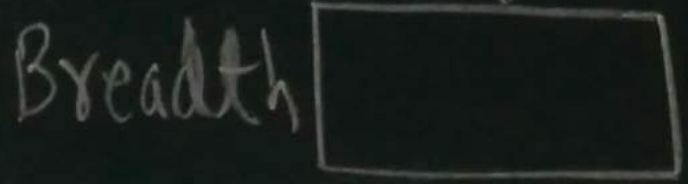


The area of a square of side 1 cm long is expressed as 1 square cm. It is written in short as 1 sq. cm or  $1 \text{ cm}^2$ .

The area of a square of side 1 m long is expressed as 1 square m. It is written in short as 1 sq. m or  $1 \text{ m}^2$ .



(1) Area of a rectangle = (Length x Breadth) square units



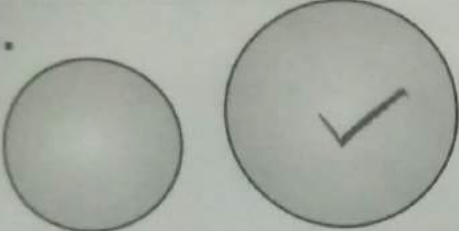
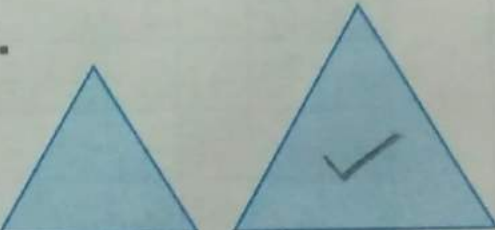
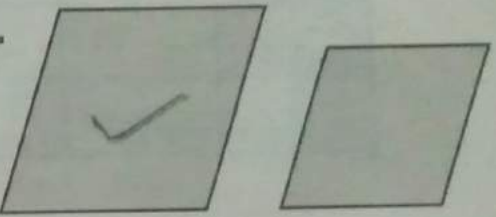
(2) Area of a square = (side x side) square units

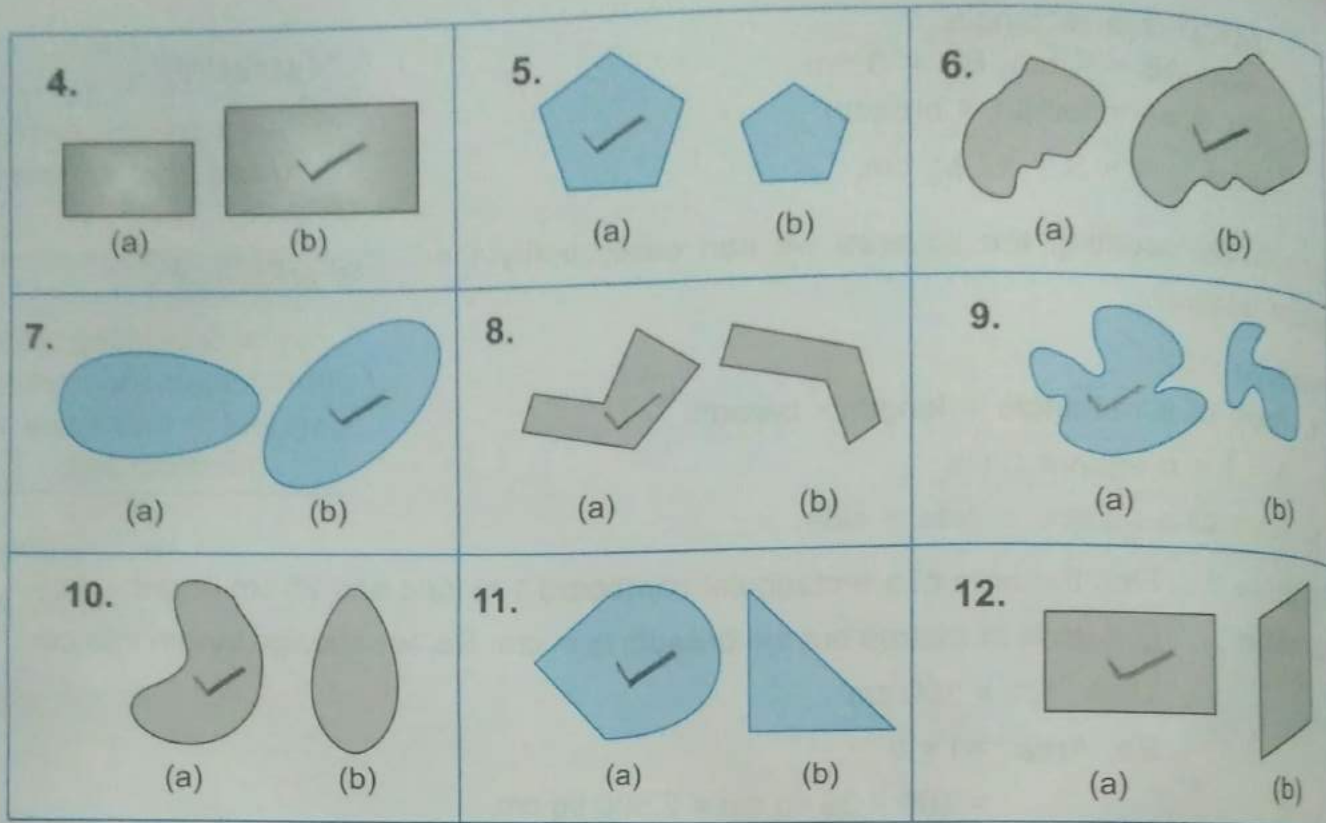
**Example 3 :** Length of a rectangular park is 3 times its breadth. If the length of the park is 90 metres, then find the area of the park.

**Solution :** Length of rectangular park = 90 m  
So, the breadth =  $90 \text{ m} \div 3 = 30 \text{ m}$ .  
Area of the rectangle = length  $\times$  breadth  
=  $90 \text{ m} \times 30 \text{ m} = 2700 \text{ sq m}$ .

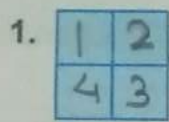
## EXERCISE 10B

A. By mere observation, state which has greater area?

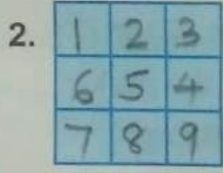
<p>1.</p>  <p>(a) (b)</p>	<p>2.</p>  <p>(a) (b)</p>	<p>3.</p>  <p>(a) (b)</p>
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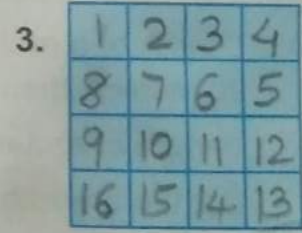
B. In the following figures, assume that each small square is 1 sq cm. Count the squares and find the area:



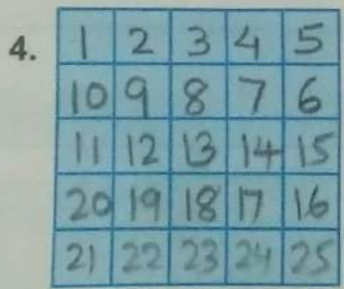
How many squares are there in all?  
There are 4 squares  
Hence, Area = 4 sq cm



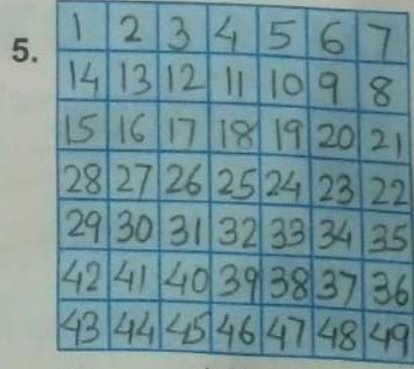
Area = 9 sq cm



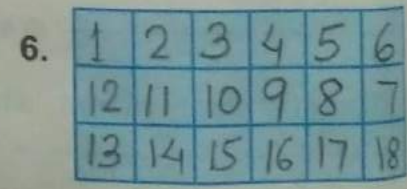
Area = 16 sq cm



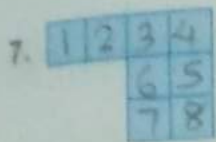
Area = 25 sq cm



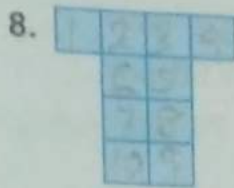
Area = 49 sq cm



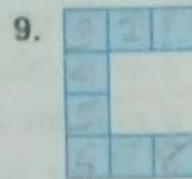
Area = 18 sq cm



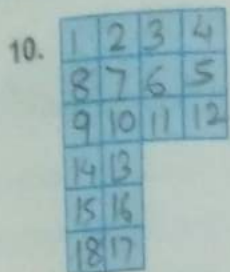
Area = 8 sq cm



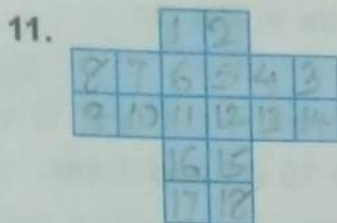
Area = 10 sq cm



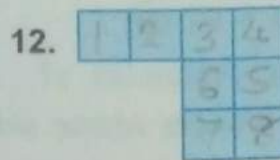
Area = 8 sq cm



Area = 18 sq cm

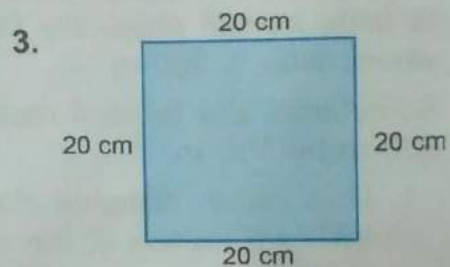
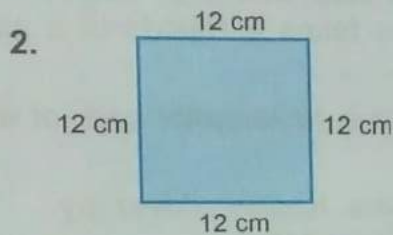
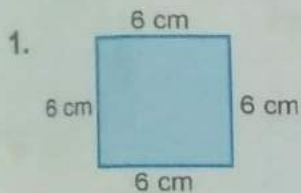


Area = 18 sq cm

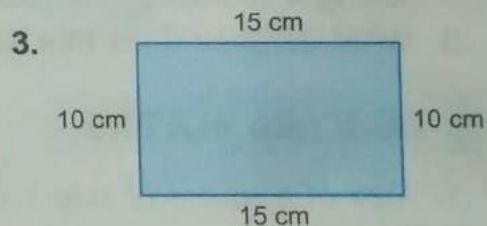
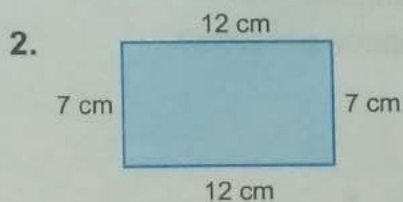
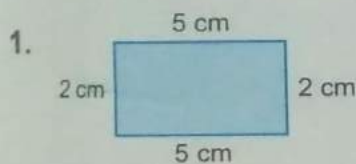


Area = 8 sq cm

C. Find the area of the following squares :



D. Find the area of the following rectangles :



E. Find the area of the rectangle, whose :

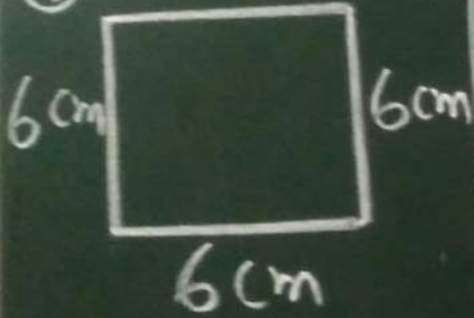
- length = 100 m, breadth = 50 m
- length = 80 cm, breadth = 24 cm
- length = 8 cm, breadth = 6 cm
- length = 125 m, breadth = 84 m
- length = 2 m, breadth = 85 cm
- length = 1 m 5 cm, breadth = 90 cm
- length = 2 m 20 cm, breadth = 95 cm

NOTE → While calculating area, both length and breadth should be expressed in the same units. If the length and breadth are both expressed in cm, we get the area in sq. cm. If both length and breadth are expressed in m, we get the area in sq. m.

Q.C. Find the EXERCISE-10B PAGE No. 157

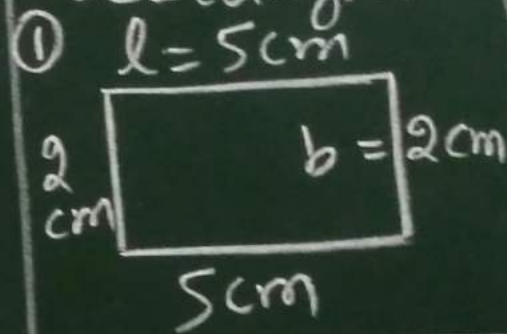
area of the following squares:

① 6 cm (side)



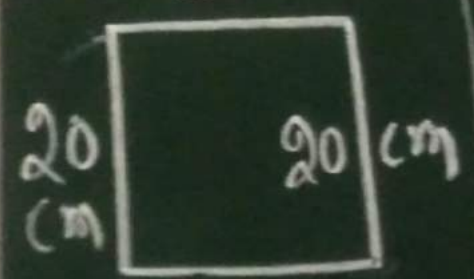
Area of the square  
= side  $\times$  side  
= 6 cm  $\times$  6 cm  
= 36 sq. cm Ans

Q.D. Find the area of the following rectangles:

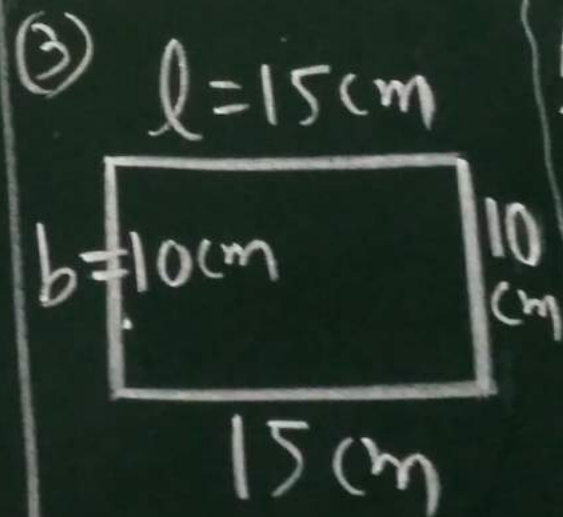


Area of the rectangle  
= length  $\times$  breadth  
= 5 cm  $\times$  2 cm  
= 10 sq. cm Ans

③ 20 cm



Area of the square  
= side  $\times$  side  
= 20 cm  $\times$  20 cm  
= 400 sq. cm  
Ans



Area of the rectangle  
= length  $\times$  breadth  
= 15 cm  $\times$  10 cm  
= 150 sq. cm  
Ans

Q.E. Find the area of the rectangle, whose:

① length = 100m, breadth = 50m

Solution: Area of the rectangle

$$= \text{length} \times \text{breadth}$$

$$= 100\text{m} \times 50\text{m}$$

$$= 5,000 \text{ sq. m Ans}$$

⑤ length = 2m, breadth = 85cm

$$l = 2 \times 100\text{cm} = 200\text{cm} \quad [1\text{m} = 100\text{cm}]$$

∴ Area of the rectangle

$$= \text{length} \times \text{breadth}$$

$$= 200\text{cm} \times 85\text{cm}$$

$$= 17,000 \text{ sq. cm Ans}$$

⑥ length = 1m 5cm, breadth = 90cm

$$l = 1\text{m} + 5\text{cm} = 100\text{cm} + 5\text{cm} = 105\text{cm}$$

∴ Area of the rectangle

$$= \text{length} \times \text{breadth}$$

$$= 105\text{cm} \times 90\text{cm} = \underline{9,450 \text{ sq. cm}} \text{ Ans}$$

⑧ length = 4m 50cm | breadth = 2m 7cm

$$= 4\text{m} + 50\text{cm}$$

$$= 4 \times 100\text{cm} + 50\text{cm}$$

$$= 400\text{cm} + 50\text{cm}$$

$$= 450\text{cm}$$

∴ Area of the rectangle

$$= \text{length} \times \text{breadth}$$

$$= 450\text{cm} \times 207\text{cm}$$

$$= 93,150 \text{ sq. cm Ans}$$

$$= 2\text{m} + 7\text{cm}$$

$$= 2 \times 100\text{cm} + 7\text{cm}$$

$$= 200\text{cm} + 7\text{cm}$$

$$= 207\text{cm}$$

⑩ length = 5m 8cm

$$= 5\text{m} + 8\text{cm}$$

$$= 5 \times 100\text{cm} + 8\text{cm}$$

$$= 500\text{cm} + 8\text{cm}$$

$$= 508\text{cm}$$

∴ Area of the rectangle

$$= \text{length} \times \text{breadth}$$

$$= 508\text{cm} \times 375\text{cm}$$

$$= 1,90,500 \text{ sq. cm Ans}$$

breadth = 3m 75cm

$$= 3\text{m} + 75\text{cm}$$

$$= 3 \times 100\text{cm} + 75\text{cm}$$

$$= 300\text{cm} + 75\text{cm}$$

$$= 375\text{cm}$$