Access answers to Maths NCERT Solutions for Class 7 Chapter 11 – Perimeter and Area Exercise 11.1

1. The Length and the breadth of a rectangular piece of land are 500 m and 300 m respectively. Find

(i) Its area (ii) the cost of the land, if 1 m^2 of the land costs □ 10,000.

Solution:-

From the question it is given that,

Length of the rectangular piece of land = 500 m

Breadth of the rectangular piece of land = 300 m

Then,

(i) Area of rectangle = Length × Breadth

= 500 × 300

= 150000 m^2

(ii) Cost of the land for 1 m^2 = □ 10000

Cost of the land for 150000 m^2 = 10000 × 150000

= □ 1500000000

2. Find the area of a square park whose perimeter is 320m.

Solution:-

From the question it is given that,

Perimeter of the square park = 320 m

4 × Length of the side of park = 320 m

Then,

Length of the side of park = 320/4

= 80 m

So, Area of the square park = (length of the side of park)^2

= 80^2

= 6400 m^2

3. Find the breadth of a rectangular plot of land, if its area is 440 m^2 and the length is 22 m. Also find its perimeter.

Solution:-

From the question it is given that,

Area of the rectangular plot = 440 m^2

Length of the rectangular plot = 22 m

We know that,

Area of the rectangle = Length × Breadth

440 = 22 × Breadth

Breadth = 440/22

Breadth = 20 m

Then,

Perimeter of the rectangle = 2(Length + Breadth)

= 2 (22 + 20)

= 2(42)

= 84 m

∴Perimeter of the rectangular plot is 84 m.

4. The perimeter of a rectangular sheet is 100 cm. If the length is 35 cm, find its breadth.

Also find the area.

Solution:-

From the question it is given that,

Perimeter of the a rectangular sheet = 100 cm

Length of the rectangular sheet = 35 cm

We know that,

Perimeter of the rectangle = 2 (Length + Breadth)

100 = 2 (35 + Breadth)

(100/2) = 35 + Breadth

50 – 35 = Breadth

Breadth = 15 cm

Then,

Area of the rectangle = Length × Breadth

= 35 × 15

= 525 cm^2

∴Area of the rectangular sheet is 525 cm^2

5. The area of a square park is the same as of a rectangular park. If the side of the square park is 60 m and the length of the rectangular park is 90 m, find the breadth of the rectangular park.

Solution:-

From the question it is given that,

Area of a square park is the same as of a rectangular park.

Side of the square park = 60 m

Length of the rectangular park = 90 m

We know that,

Area of the square park = (one of the side of square)^2

= 60^2

= 3600 m^2

Area of the rectangular park = 3600 m^2 … [∵ given]

Length × Breadth = 3600

90 × Breadth = 3600

Breadth = 3600/90

Breadth = 40 m

6. A wire is in the shape of a rectangle. Its length is 40 cm and breadth is 22 cm. If the same wire is rebent in the shape of a square, what will be the measure of each side.

Also find which shape encloses more area?

Solution:-

By reading the question we can conclude that, perimeter of the square is same as perimeter of rectangle.

From the question it is given that,

Length of the rectangle = 40 cm

Breadth of the square = 22 cm

Then,

Perimeter of the rectangle = Perimeter of the Square

2 (Length + Breadth) = 4 × side

2 (40 + 22) = 4 × side

2 (62) = 4 × side

124 = 4 × side

Side = 124/4

Side = 31 cm

So, Area of the rectangle = (Length × Breadth)

= 40 × 22

= 880 cm^2

Area of square = $side^2$

= 31^2

= 31 × 31

= 961 cm^2

∴Square shaped wire encloses more area.

7. The perimeter of a rectangle is 130 cm. If the breadth of the rectangle is 30 cm, find its length. Also find the area of the rectangle.

Solution:-

From the question it is given that.

Perimeter of the rectangle = 130 cm

Breadth of the rectangle = 30

We know that,

Perimeter of rectangle = 2 (Length + Breadth)

130 = 2 (length + 30)

130/2 = length + 30

Length + 30 = 65

Length = 65 – 30

Length = 35 cm

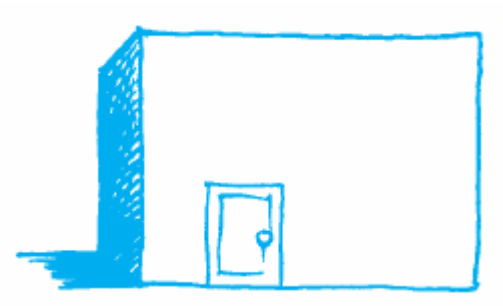
Then,

Area of the rectangle = Length × Breadth

= 35 × 30

= 1050 cm^2

8. A door of length 2 m and breadth 1 m is fitted in a wall. The length of the wall is 4.5 m and the breadth is 3.6 m (Fig). Find the cost of white washing the wall, if the rate of white washing the wall is □ 20 per m^2.



Solution:-

From the question it is given that,

Length of the door = 2 m

Breadth of the door = 1 m

Length of the wall = 4.5 m

Breadth of the wall = 3.6 m

Then,

Area of the door = Length × Breadth

= 2 × 1

= 2 m^2

Area of the wall = Length × Breadth

= 4.5 × 3.6

= 16.2 m^2

So, Area to be white washed = 16.2 – 2 = 14.2 m^2

Cost of white washing 1 m^2 area = □ 20

Hence cost of whit washing 14.2 m^2 area = 14.2 × 20

= □ 284