



#### Areas Related to Circles Ex 15.1 Q1

**Answer :**

We know that the circumference  $C$  and area  $A$  of a circle of radius  $r$  are given by  $C = 2\pi r$  and  $A = \pi r^2$  respectively.

Here,  $r = 4.2$  cm

So substituting the value of  $r$  in above formulas,

Circumference of the circle

$$C = 2 \times \pi \times 4.2 \text{ cm}$$

$$= 2 \times \frac{22}{7} \times 4.2 \text{ cm}$$

$$= \boxed{26.4 \text{ cm}}$$

Area of the circle

$$A = \pi \times 4.2 \times 4.2 \text{ cm}^2$$

$$= \frac{22}{7} \times 4.2 \times 4.2 \text{ cm}^2$$

$$= \boxed{55.4 \text{ cm}^2}$$

#### Areas Related to Circles Ex 15.1 Q2

**Answer :**

Let  $r$  cm be the radius of the circle. Then

Area of a circle is

$$A = \pi r^2 \text{ cm}^2$$

$$301.84 \text{ cm}^2 = \pi \times r^2$$

$$301.84 \text{ cm}^2 = \frac{22}{7} \times r^2$$

$$r^2 = 96.04 \text{ cm}^2$$

$$r = 9.8 \text{ cm}$$

We know that the Circumference of circle of radius  $r$  is

$$C = 2\pi r \text{ cm}$$

So substituting the value of  $r$  in above formula

$$C = 2 \times \frac{22}{7} \times 9.8 \text{ cm}$$

$$= \boxed{61.6 \text{ cm}}$$

#### Areas Related to Circles Ex 15.1 Q3

**Answer :**

Let  $r$  be the radius of the circle. Then

Circumference of the circle

$$C = 2 \times \pi \times r$$

$$44 \text{ cm} = 2 \times \frac{22}{7} \times r$$

$$44 \text{ cm} = \frac{44}{7} \times r$$

$$r = \boxed{7 \text{ cm}}$$

We know that the area of a circle of radius  $r$  is

$$A = \pi r^2$$

Substituting the value of  $r$  in above formula

$$A = \pi \times 7 \times 7 \text{ cm}^2$$

$$= \frac{22}{7} \times 49 \text{ cm}^2$$

$$= \boxed{154 \text{ cm}^2}$$

\*\*\*\*\* END \*\*\*\*\*