



Areas Related to Circles Ex 15.2 Q7

**Answer :**

We know that the area  $A$  of a sector of an angle  $\theta$  in the circle of radius  $r$  is given by

$$A = \frac{\theta}{360^\circ} \times \pi r^2$$

It is given that  $r = 8 \text{ cm}$  and  $\theta = 135^\circ$ .

Now we substitute the value of  $r$  and  $\theta$  in above formula,

$$\begin{aligned} A &= \frac{135^\circ}{360^\circ} \times \pi \times 8 \times 8 \text{ cm}^2 \\ &= \boxed{24\pi \text{ cm}^2} \end{aligned}$$

Areas Related to Circles Ex 15.2 Q8

**Answer :**

We know that the area  $A$  of a sector of an angle  $\theta$  in the circle of radius  $r$  is given by

$$A = \frac{\theta}{360^\circ} \times \pi r^2$$

It is given that  $r = 2 \text{ cm}$  and area  $A = \pi \text{ cm}^2$ .

Now we substitute the value of  $r$  and  $A$  in above formula to find the value of  $\theta$ ,

$$\begin{aligned} \pi &= \frac{\theta}{360^\circ} \times \pi \times 2 \times 2 \\ \theta &= \frac{360^\circ \times \pi}{\pi \times 2 \times 2} \\ &= \boxed{90^\circ} \end{aligned}$$

Areas Related to Circles Ex 15.2 Q9

**Answer :**

We know that the area  $A$  of a sector of an angle  $\theta$  in the circle of radius  $r$  is given by

$$A = \frac{\theta}{360^\circ} \times \pi r^2$$

It is given that radius  $r = 5 \text{ cm}$  and area  $A = 5\pi \text{ cm}^2$ .

Now we substitute the value of  $r$  and  $A$  in above formula to find the value of  $\theta$ ,

$$\begin{aligned} 5\pi &= \frac{\theta}{360^\circ} \times \pi \times 5 \times 5 \\ \theta &= \frac{360^\circ \times 5\pi}{\pi \times 5 \times 5} \\ &= \boxed{72^\circ} \end{aligned}$$

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