Areas Related to Circles Ex 15.2 Q7

Answer :

We know that the area A of a sector of an angle θ 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 θ in above formula,

$$A = \frac{135^\circ}{360^\circ} \times \pi \times 8 \times 8 \text{ cm}^2$$

$$= \boxed{24\pi \text{ cm}^2}$$

Areas Related to Circles Ex 15.2 Q8

Answer :

We know that the area A of a sector of an angle θ 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 θ,

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

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

$$= \boxed{90^\circ}$$

Areas Related to Circles Ex 15.2 Q9

Answer :

We know that the area A of a sector of an angle θ 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 θ,

$$5\pi = \frac{\theta}{360^\circ} \times \pi \times 5 \times 5$$

$$\theta = \frac{360^\circ \times 5\pi}{\pi \times 5 \times 5}$$

$$= \boxed{72^\circ}$$

********** END **********