

Soln:



Given data:

Distance travelled = 1000 m

Number of revolutions made = $n = 450$

Formula used:

We know that, Circumference of a circle (C) = $2\pi r$

Distance for 450 revolutions = $(2 \times 3.14 \times r) \times 450$

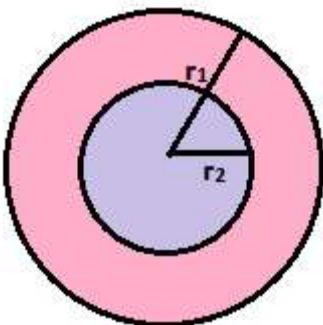
But we have been given with a distance

$$(2 \times 3.14 \times r) \times 450 = 1000$$

$$\text{Radius, } r = \frac{1000}{9\pi} \text{ cm}$$

Q19. The area enclosed by two concentric circles is 770 cm^2 . If the radius of the outer circle is 21 cm, then find the radius of the inner circle.

Soln:



Given Data :

Radius of outer circle = $R_1 = 21$ cm

Radius of inner circle = R_2

Area between concentric circles = area of outer circle – area of inner circle

Formula used :

We know that, Area of a Circle =

$$770 \text{ cm}^2 = (R_1^2 - R_2^2)$$

$$R_1^2 - R_2^2 = 245$$

$$21^2 - R_2^2 = 245$$

$$R_2 = 14 \text{ cm}$$

Therefore, the radius of the inner circle is 14 cm.

