

Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Class 7-Mathematics

Chapter 16

PERIMETER AND AREA

For a circle with radius  $r$ ,

$$\text{diameter} = 2 \times r$$

$$\text{Circumference} = 2\pi r$$

$$\text{Area} = \pi r^2$$

$$\pi = \frac{22}{7} = 3.14 \text{ approx.}$$

Exercise 16.3

Question 6.Solution:

Let the diameter of the circle be  $x$  cm.

$$\text{Circumference of the circle} = x + 30 \text{ cm.}$$

$$\text{Radius } r = \frac{x}{2} \text{ cm.}$$

$$2\pi r = x + 30$$

$$2 \times \frac{22}{7} \times \frac{x}{2} = x + 30$$

$$\frac{22x}{7} = x + 30$$

$$\frac{22x}{7} - x = 30$$

$$\frac{22x - 7x}{7} = 30$$

$$\frac{15x}{7} = 30$$

$$x = \frac{30 \times 7}{15} = 14 \text{ cm}$$

$$\text{Radius} = \frac{14}{2} = 7 \text{ cm}$$

Question 10: Solution

$$\text{Diameter of the wheel} = 56 \text{ cm}$$

$$\text{Circumference} = \pi d$$

$$= \frac{22}{7} \times 56$$
$$= 22 \times 8 = 176 \text{ cm.}$$

Total distance

$$= 88 \text{ km}$$
$$= 88 \times 1000 \times 100 \text{ cm}$$
$$= 8800000 \text{ cm}$$

No. of rotations the wheel takes =  $\frac{8800000}{176}$

$$= 50,000$$

**Home work: Solve Exercise 16.3 Questions 3, 5, 11, 14, 19, 20 in the maths copy.**

**Practise Exercise 16.3 all problems.**