Subject: Maths Class: 10 Topic: Ch.15 Circumference & Area of Circle

Watch video #17 and solve the following exercise:

EXERCISE 15.3

1. Find the circumference of the incircle of a square of side 14 cm.
2. Difference between the circumference and radius of a circle is 74 cm. Find the area of the circle.
3. In the given fig. 15.13, O is the centre of the circle. $\angle AOB = 90°$ and $OA = 3$ cm. Find the area of the shaded region.

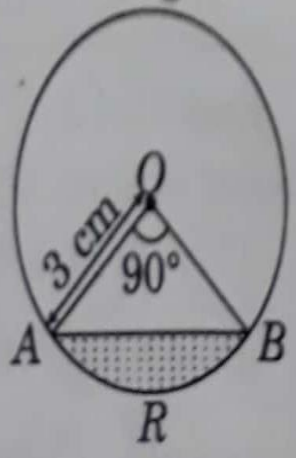

Fig. 15.14

4. The circumference of a circle is equal to the perimeter of a square. Find the ratio of their areas.

5. The radius of a circular park is 3.5 m. A 1.4 m wide footpath is made all round the circular park. Find the area of the footpath (see fig. 15.15).

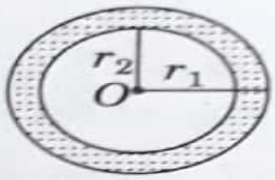

Fig. 15.15

6. Find the area of the largest square that can be drawn inside a circle of radius 8 cm.

7. In the given fig. 15.16, $ABMC$ is a quadrant of a circle of radius 14 cm and a semicircle is drawn with BC as diameter. Find the area of the shaded region.

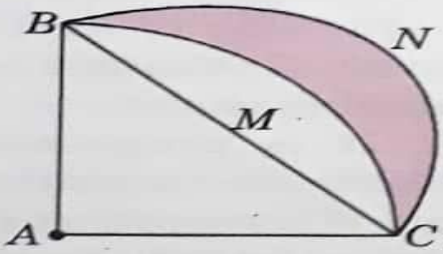

Fig. 15.16

8. In the given fig. 15.17, AB is a diameter, $AC = 6$ cm, $BC = 8$ cm. Find the shaded region.

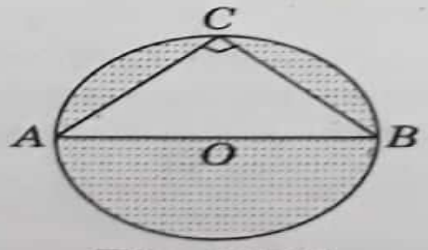

Fig. 15.17

9. Find the area of the shaded design in the fig. 15.18, where $ABCD$ is a square of side 10 cm and semicircles are drawn with each side of the square as diameter (use $\pi = 3.14$).

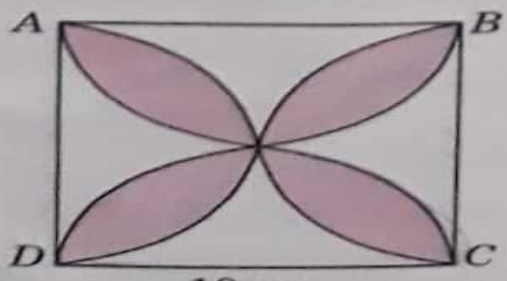

Fig. 15.18

10. In the given fig. 15.19, radius of the semicircle is 7 cm. Find the area of the circle drawn inside the semicircle.

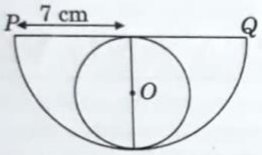

Fig. 15.19

11. If the sum of circumferences of two circles of radii R_1 and R_2 is equal to the circumference of a circle of radius R, then which of the following choices is correct?
    (a) $R_1 + R_2 = R$
    (b) $R_1 + R_2 > R$
    (c) $R_1 + R_2 < R$
    (d) Nothing can be said with certainty.
12. The circumference of the incircle of a square of side 14 cm is—
    (a) 22 cm (b) 44 cm
    (c) 33 cm (d) 55 cm