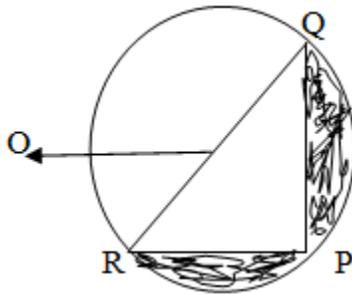


Class: 10
Subject: Math's
Topic: Areas related to circles
No. of Questions: 20

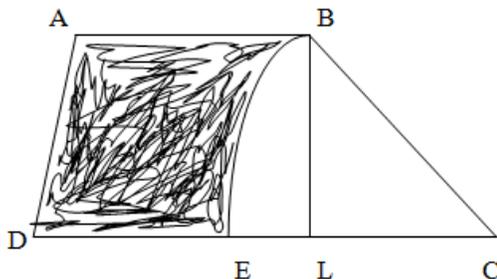
- Q.1 The circumference of a circle exceeds the diameter by 16.8 cm. Find the radius of the circle.
- Q.2 Two circles touch externally. The sum of their areas is 130π sq. cm. and the distance between their centers is 14 cm. Find the radii of the circles.
- Q.3 Two circles touch internally. The sum of their areas is 116π cm² and distance between their centers is 6 cm. Find the radii of the circles.
- Q.4 A copper wire, when bent in the form of a square, encloses an area of 484 cm². If the same wire is bent in the form of a circle, find the area enclosed by it. (Use $\pi = 22/7$).
- Q.5 A wheel has diameter 84 cm. Find how many complete revolutions must it take to cover 792 meters.
- Q.6 A boy is cycling such that the wheels of the cycle are making 140 revolutions per minute. If the diameter of the wheels is 60 cm, calculate the speed per hour with which the boy is cycling.
- Q.7 The length of minute hand of a clock is 14 cm. Find the area swept by the minute hand in one minute. (Use $\pi = 22/7$)
- Q.8 The short and long hands of a clock are 4 cm and 6 cm long respectively. Find the sum of distances travelled by their tips in 2 days. (Take $\pi = 22/7$)
- Q.9 An arc of a circle is of length 5π cm and the sector it bounds has an area of 20π cm². Find the radius of the circle.
- Q.10 A chord AB of a circle of radius 15 cm makes an angle of 60° at the centre of the circle. Find the area of the major and minor segment. (Take $\pi = 3.14$, $\sqrt{3} = 1.73$)
- Q.11 A horse is placed for grazing inside a rectangular field 70m by 52m and is tethered to one corner by a rope 21m long. On how much area can it graze?

- Q.12 A paper is in the form of a rectangle ABCD in which AB = 20cm and BC = 14cm. A semi-circular portion with BC as diameter is cut off. Find the area of a remaining part.
- Q.13 A square park has each side of 100m. At each corner of the park, there is a flower bed in the form of a quadrant of radius 14m. Find the area of the remaining part of the park (Use $\pi = 22/7$).
- Q.14 Find upto the three places of decimals the radius of the circle whose area is the sum of the areas of two triangles whose sides are 35, 53, 66 and 33, 56, 65, measured in centimeters.
- Q.15 Find the area of the shaded region from the given figure, if PQ=24 cm, PR=7 cm and O is the centre of the circle.

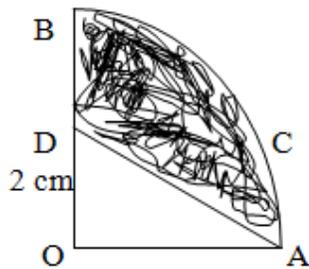


- Q.16 ABCD is a trapezium with $AB \parallel DC$ and $\angle BCD = 60^\circ$. If BEC is a sector of a circle with centre C and $AB = BC = 7$ cm and $DE = 4$ cm, then find the area of the shaded region. (Use $\sqrt{3} = 1.732$)

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- Q.17 The minute hand of a clock is 10 cm long. Find the area of the face of the clock described by the minute hand between 9 A.M. and 9.35 A.M.
- Q.18 A pendulum swings through an angle of 30° and describes an arc 8.8 cm in length. Find the length of the pendulum.
- Q.19 AOBCA represents a quadrant of a circle of radius 3.5 cm with centre O. Calculate the area of the shaded portion.



- Q.20 In an equilateral triangle of side 24 cm, a circle is inscribed touching its sides. Find the area of the remaining portion of the triangle. (Take $\sqrt{3} = 1.732$)