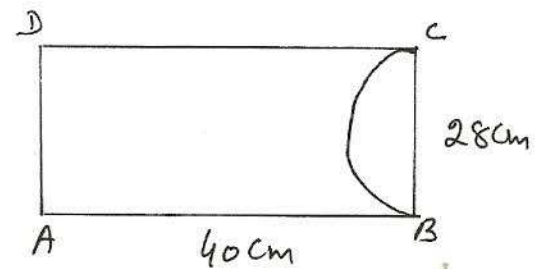


X-Mathematics Assignment No 04- Areas Related to Circles.

- Q1. The area of an equilateral Δ is $49\sqrt{3} \text{ cm}^2$. Taking each angular point as centre, a circle is described with radius equal to half the length of the side of the triangle. Find the area of the triangle not included in the circle.
- Q2. The area of a circle inscribed in an Equilateral triangle is 154 cm^2 . Find the perimeter of the triangle and also the area of the Δ (Equilateral) (use $\pi = \frac{22}{7}$, $\sqrt{3} = 1.73$)
- Q3. In an Equilateral triangle of side 18 cm , a circle is inscribed touching its sides. Find the area of the remaining portion of the triangle ($\sqrt{3} = 1.732$)
- Q4. A sheet of paper in the form of rectangle ABCD of sides $40 \text{ cm} \times 28 \text{ cm}$. A semi-circular portion with BC as diameter is cut off. Find the area of the remaining paper.

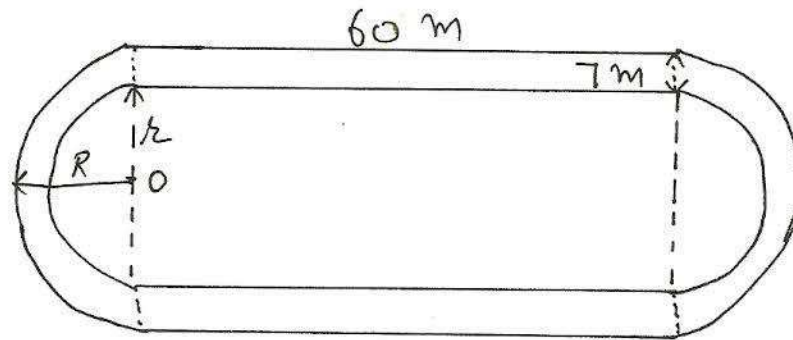


Cont Pg 2

- Q5. Find the area of the region between the two concentric circles, if the length of the chord of the outer circle touching the inner circle is 14cm.
- Q6. $OABC$ is a rhombus whose three vertices A, B, C lie on a circle with centre O . If the radius of the circle is 10cm. Find the area of the rhombus.
- Q7. The short and long hand of a clock are 4cm and 6cm long respectively. Find the sum of distances travelled by their tips in 2 days.
- Q8. A boy is cycling such that the wheels of the cycle are making 140 revolutions per minute. If the diameter of the wheel is 60cm, calculate the speed per hour with which the boy is cycling.
- Q9. The inner circumference of a circular track is 440 m. The track is 14m wide. Calculate the cost of levelling the track at the rate of 10.25 paise per square meter. Also find the cost of fencing the outer circle at the rate of Rs25 per meter.

Cont-Pg 3

Q 10.



The inside perimeter of a running track as shown above in the diagram. The length of each of the straight portion is 60 m and the ends are semi-circular. The width of the track every where is 7 m, find the area of the track.

ANSWERS:-

(Q1)	7.868 cm^2	(Q6)	86.6 cm^2
(Q2)	$P = 72.7 \text{ cm}$ $A = 100.3 \text{ cm}^2$	(Q7)	$608\pi \text{ cm}$
(Q3)	55.43 cm^2	(Q8)	1584 km/hr
(Q4)	308 cm^2	(Q9)	levelling = Rs 69454 Fencing = Rs 13200
(Q5)	154 cm^2	(Q10)	2534 m^2