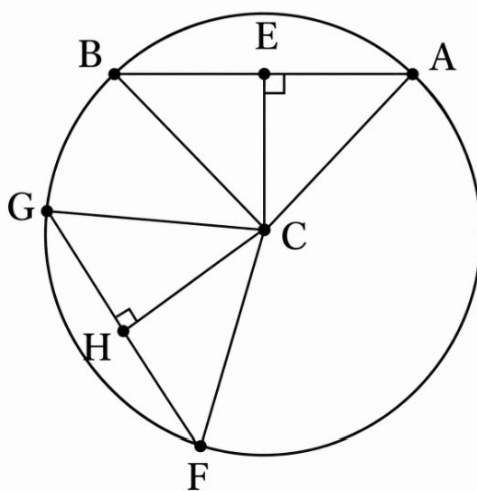


Class : IXTH
Date :

Subject : MATHS
DPP No. : 3

I'M UP & DOWN, & ROUND & ROUND

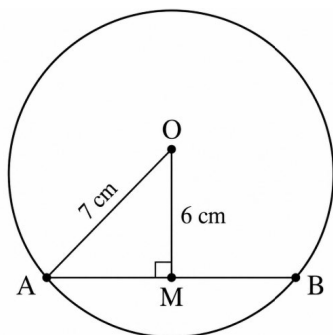
- Q 1. Draw $\triangle ABC$ with $AB = 5$ cm, $\angle A = 100^\circ$, $AC = 4$ cm. Draw the circumcircle of $\triangle ABC$. Is the centre inside or outside the triangle?
- Q 2. Draw $\triangle ABC$, with $AB = 6$ cm, $BC = 7$ cm, $CA = 7$ cm. Draw the circumcircle of $\triangle ABC$. Let the circumcentre be O . Measure OA , OB , OC .
- Q 3. An isosceles triangle ABC is inscribed in a circle, with $AB = AC$. Show that the altitude from A to BC passes through the centre of the circle.
- Q 4. Two parallel chords of lengths 6 cm and 8 cm are on opposite sides of the centre of a circle. If the radius of the circle is 5 cm, find the distance between the midpoints of the chords.
- Q 5. Use the Baudhāyana-Pythagoras theorem to show why "chords of a circle having the same length are all at the same distance from the centre of the circle."
- Q 6. Consider the given figure. If CE is perpendicular to AB , CH is perpendicular to GF , and $CE = CH$, show that $AB = GF$.



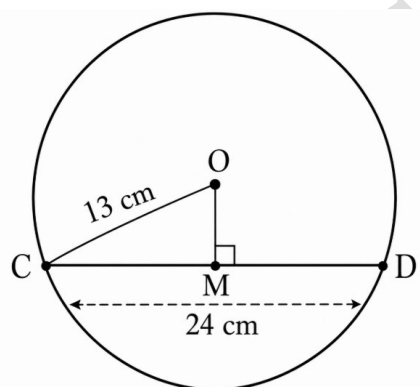
- Q 7. Solve the previous question using the Baudhāyana-Pythagoras theorem.



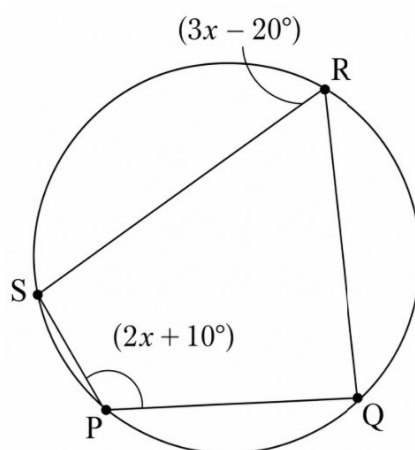
- Q 8. Find the length of the chord of a circle where the radius is 7 cm and perpendicular distance is 6 cm .



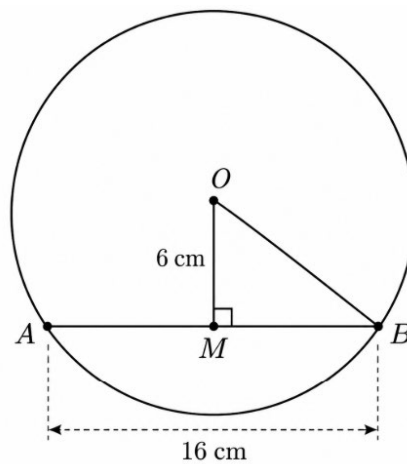
- Q9. The diameter of a circle is 26 cm . A chord of length 24 cm is drawn in the circle. Find the distance from the centre of the circle to the chord.



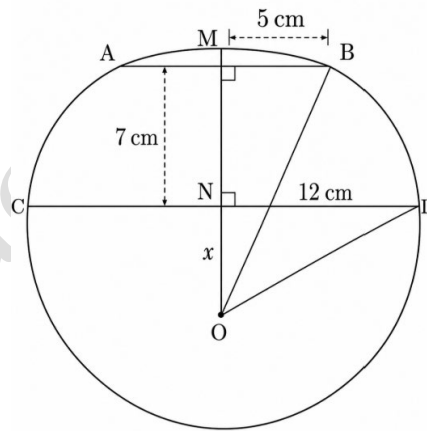
- Q 10. Quadrilateral $PQRS$ is inscribed in a circle. If $\angle P = (2x + 10)^\circ$ and $\angle R = (3x - 20)^\circ$, find the value of x and the measures of $\angle P$ and $\angle R$.



- Q 11. The distance of a chord of length 16 cm from the centre of a circle is 6 cm . Find the radius of the circle.



- Q 12. A cyclic quadrilateral has sides 5,5,12, 12 units. Find its area.
- Q 13. Two parallel chords of lengths 10 cm and 24 cm are on the same side of the centre of a circle. The distance between the chords is 7 cm . Find the radius of the circle.



ANSWER KEY

1. Outside
2. $OA = OB = OC = 3.9 \text{ cm}$ (approx)
4. 7 cm
8. $2\sqrt{13} \text{ cm}$
9. 5 cm
10. $x = 38, \angle P = 86^\circ, \angle R = 94^\circ$
11. 10 cm
12. 60 Sq.units
13. 5 cm



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