

CLASS 9 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 5: HOTS: Up and Down, Round and Round, Circles (Class 9)

Daily practice problems: 8 questions with an answer key

Try every question on your own first. The answer key is on the last page.

1. A chord of length 24 cm is 5 cm from the centre of a circle. Find the radius.
2. An arc subtends an angle of 130° at the centre. Find the angle it subtends at a point on the remaining part of the circle.
3. In a cyclic quadrilateral ABCD, $\angle A = 100^\circ$ and $\angle B = 80^\circ$. Find $\angle C$ and $\angle D$.
4. Two equal chords of length 6 cm are drawn in a circle of radius 5 cm. Find the distance of each from the centre.
5. AB is a diameter and C is a point on the circle with $\angle CAB = 40^\circ$. Find $\angle ABC$.
6. Two parallel chords of lengths 6 cm and 8 cm are drawn in a circle of radius 5 cm on opposite sides of the centre. Find the distance between them.
7. An arc subtends 60° at the centre. What angle does it subtend at a point on the alternate (major) arc?
8. How many circles can be drawn through two given points? And through three points that are not on a line?

Answer Key

1. 13 cm.
2. 65° .
3. $\angle C = 80^\circ$ and $\angle D = 100^\circ$.
4. 4 cm.
5. 50° .
6. 7 cm (the distances from the centre are 4 cm and 3 cm).
7. 30° .
8. Infinitely many through two points, and exactly one through three non-collinear points.

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