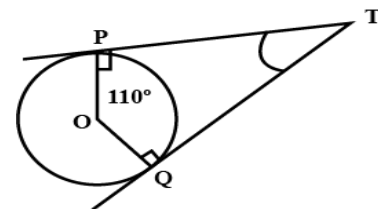


Circles

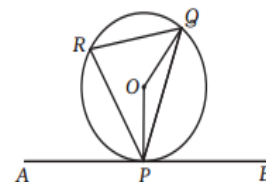
1. In the adjoining figure, TP and TQ are the tangents to the circle with centre O. The measure of $\angle PTQ$ is .

- a. 90°
- b. 110°
- c. 70°
- d. 40°



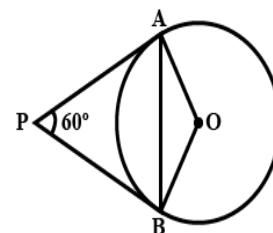
2. In the give figure, APB is tangent of the circle at the point P on the circle. PQ is a chord. If $\angle BPQ = 62^\circ$, then $\angle PRQ$ is equal to.

- a. 28°
- b. 118°
- c. 124°
- d. 62°



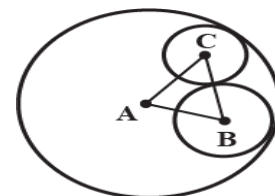
3. In the figure O is the centre of the circle AP and BP are the tangents at points A and B respectively. If $\angle OAB = 30^\circ$, then the measure of $\angle APB$ is.

- a. 30°
- b. 15°
- c. 60°
- d. 90°



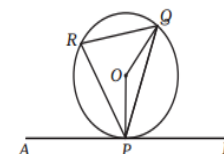
4. Three circles with centres A, B and C touch each other as shown in the figure. If the radii of these circles are 8cm, 3cm and 2cm respectively, then the perimeter of $\triangle ABC$ is.

- a. 13cm
- b. 16cm
- c. 3cm
- d. 26cm



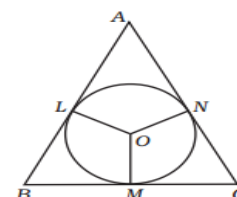
5. In the given figure, APB is tangent at P to the circle with centre O. If $\angle QPB = 60^\circ$, then the measure of $\angle POQ$ is:

- a. 60°
- b. 30°
- c. 120°
- d. 90°



6. In the given figure, AB, BC and AC touch the circle at L, M and N respectively. If $\angle B = 70^\circ$ and $\angle C = 60^\circ$, then the measure of $\angle LON$ is:

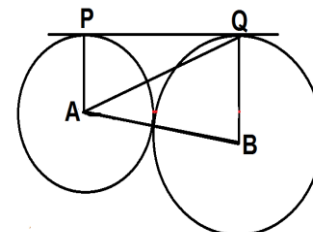
- a. 50°
- b. 110°
- c. 120°
- d. 130°



a.

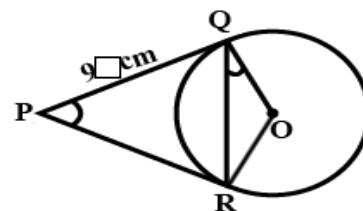
7. Two circles of radii 8cm and 5 cm with their centres A and B touching each other externally is shown in the figure below. The length of direct common tangent PQ is:

- a. $16\sqrt{10}$ cm
- b. $4\sqrt{10}$ cm
- c. $10\sqrt{16}$ cm
- d. $2\sqrt{10}$ cm



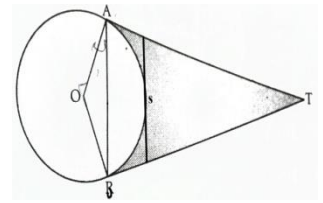
8. Tangents PQ and PR are drawn to a circle from an external point P. If $PQ = 9$ cm and $\angle PQR = 60^\circ$, then the length of the chord QR is:

- a. 4.5 cm
- b. 6cm
- c. 9cm
- d. 18cm



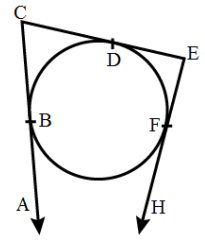
9. In the given figure, TA and TB are tangents drawn from the external point T. PQ is another tangent at S. If the perimeter, of Δ PTQ is 20cm, then the length of AT is:

- a. 8cm
- b. 10cm
- c. 16cm
- d. 20cm



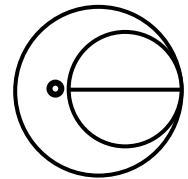
10. In the given figure AC, CE and EH are tangents drawn to the circle at B, D and F respectively. If CB = 5cm, and EF = 3cm, then the length of CE is:

- a. 2cm
- b. 5cm
- c. 3cm
- d. 8cm



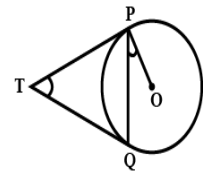
11. Two circles of radii 5cm and 3cm touch each other as shown in the figure. The distance between their centres is:

- a. 8cm
- b. 2cm
- c. 5cm
- d. 3cm



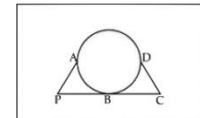
12. In the given figure TP and TQ are tangents drawn to the circle with centre O. If $\angle PTQ = 40^\circ$, then $\angle OPQ$ is:

- a. 40°
- b. 30°
- c. 20°
- d. 10°



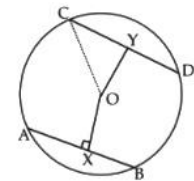
13. In the figure, AP, PC and CD are the tangents to the circle. If AP = 3cm and PC = 8cm, then the length of the tangent CD is:

- a. 3 cm
- b. 8cm
- c. 5cm
- d. 11cm



14. In the given figure, chord AB = chord CD = 8cm and OX = 3cm. Radius OC =

- a. 8 cm
- b. 5 cm
- c. 4 cm
- d. 3 cm

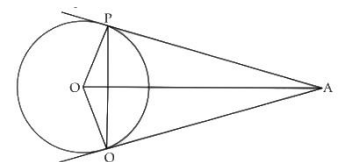


15. The length of the tangent drawn to a circle of radius 3 cm from a point which is at a distance of 5 cm from the centre of the circle is:

- a. 3 cm
- b. 8 cm
- c. 2 cm
- d. 4cm

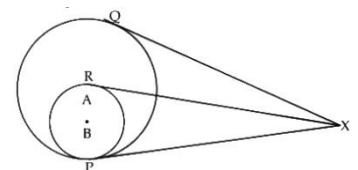
16. In the given figure if $\angle PAO = 30^\circ$, then the measure of $\angle POQ$ is:

- a. 60°
- b. 120°
- c] 90°
- d. 30°



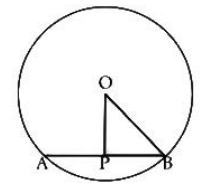
17. In the figure, XP, XQ and XR are tangents to the circles. If the length of XQ = 9 cm, then the length of tangent XR is:

- a. 18 cm
- b. 10cm
- c. 9 cm
- d. 12 cm



18. In a circle of radius 10cm, O is the centre, $OP \perp AB$. If $OP = 6$ cm, then the length of chord AB is:.

- a. 8 cm b. 12 cm c. 20 cm d. 16 cm

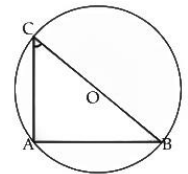


19. If two circles of radii 4.5 cm and 3.5cm are touching externally, then distance between their centres is:

- a. 8.0cm b. 1.0cm c. 7.0cm d. 7.5cm

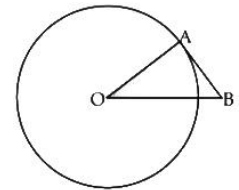
20. O is the centre of a circle, All is a chord, from the figure, $\angle ACB$ is:

- a. 90° b. Less than 90°
c. Greater than 90° d. 180°



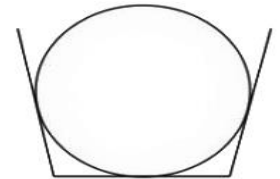
21. In the figure, AB is tangent to the circle with centre O. If $\angle AOB = 30^\circ$, then $\angle A$ and $\angle B$ respectively are:

- a. $75^\circ, 75^\circ$ b. $100^\circ, 50^\circ$
c. $80^\circ, 70^\circ$ d. $90^\circ, 60^\circ$



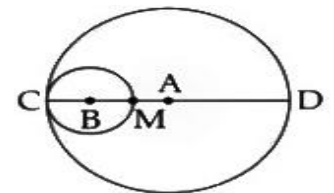
21. In the figure, AB, AC and BD are the tangents as shown in the figure. If $AB = x$ cm, $BD = y$ cm, then AC is equal to:

- a. x cm b. Y cm
c. $(x - y)$ cm d. $(x + y)$ cm



22. In the figure, A and B are the centres of two circles with radii 6cm and 2 cm respectively. CD is the diameter, then MD is equal to:

- a. 8 cm b. 6 cm
c. 4 cm d. 2 cm



23. AB and CD are two equal and parallel chords : in a circle, if the distance from the centre of the circle to the chord AB = $2x$ units, then the distance between the chords is:

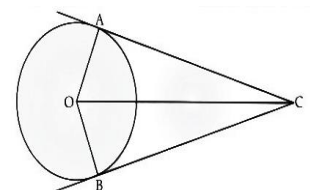
- a. $4x$ units b. $2x$ units
c. X units d. 1 unit

24. $\angle ABC$ is an angle in a major arc. Then $\angle ABC$ is:

- a. Obtuse angle b. Right angle
c. Acute angle d. Straight angle

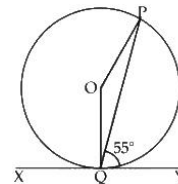
25. In the given figure, O is the centre of the circle. AC and BC are the tangents. If $\angle BOC = 65^\circ$, then $\angle ACO$ is :

- a. 25° b. 635°
c. 65° d. 115°



26. In the given figure, O is the centre of the circle. XY is a tangent. If $\angle PQY = 55^\circ$, $\angle OPQ$ is:

- a. 125° b. 120° c. 110° d. 35°



27. Two circles touch each other internally. The distance between their centres is 1.5cm. if the radius of one circle is 3.5cm, then the radius of the other circle is:

- a. 5 cm b. 4cm c. 3cm d. 2.5cm

28. ΔPQR is inscribed in a circle such that QR is diameter, if $\angle Q = 35^\circ$, then $\angle R =$

- a. 90° b. 55° c. 45° d. 35°

29. Radii of two concentric circles are 8cm and 10cm respectively. The length of the greatest chord which is a tangent to the inner circle is:

- a. 6 cm b. 8 cm c. 12 cm d. 20 cm

30. In two concentric circles of radii 6 cm and 10 cm with centre O, OP is the radius of the smaller circle. $OP \perp AB$, AB cuts the outer circle at A and B, then the length of AB is:

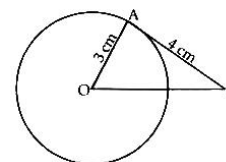
- a. 8 cm b. 16 cm c. 4 cm d. 20 cm

31. The angle formed by the radius at the point of contact with a tangent is:

- a. 30° b. 180° c. 90° d. 60°

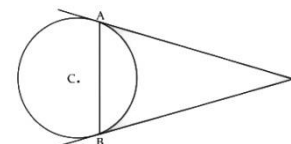
32. In the figure, the length of OP is:

- a. 5 cm b. 4 cm
c. 3 cm d. 25 cm



33. In the figure, if PA and PB are tangents and $AB = AP$, the $\angle APB$ is

- a. 30° b. 90°
c. 45° d. 60°



34. If two circles of radii 9 cm and 4 cm are touching internally, then the distance between their centres in cm is:

- a. 13 b. 36 c. 8 d. 5

35. Two circles of radii 4cm and 3cm touch each other. Then the distance between their centres is:

- b. 7 cm b. 1 cm c. Either 7cm or 1 cm d. 0 cm

36. Three circles of radii 4cm, 3cm and 2cm touch each other externally. The perimeter of the triangle formed by joining their centres is:

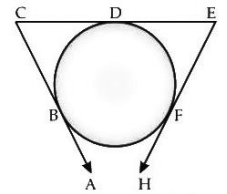
- a. 9 cm b. 15 cm c. 18 cm d. 12 cm

37. A tangent of length 16 cm is drawn to a circle at a distance of 20 cm away from the centre of the circle. The radius of the circle is:

- c. 12 cm b. 16 cm c. 20 cm d. 8 cm

38. AC, CE, EH are tangents drawn to the circles at B, D and F respectively. If CE = 10cm and DE = 3.5 cm the EF is equal to:

- a. 6.5 cm
- b. 3.5 cm
- c. 10 cm
- d. 5 cm



39. For a circle of radius 5 cm two tangents \overline{PA} and \overline{PB} are drawn from a point P. If PA = 12 cm and $\angle PAB = 60^\circ$, then the length of \overline{AB} is:

- a. 10cm
- b. 12 cm
- c. 2.5 cm
- d. 6 cm

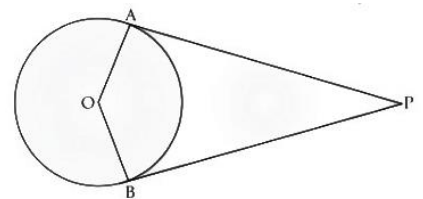
40. Two circles of radii 6.9 cm and 2.8 cm touch each other externally. Then the distance between their centres is

- a. 3.45 cm
- b. 1.4 cm
- c. 4.1 cm
- d. 9.7 cm

41. \overline{PA} and \overline{PB} are the tangents to a circle, with centre O as shown in figure.

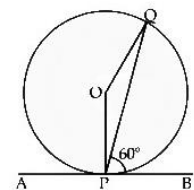
If $\angle AOB = 144^\circ$, then the measure of $\angle APB$ is:

- a. 40° cm
- b. 20° cm
- c. 90° cm
- d. 140° cm



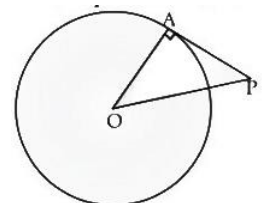
42. APB is tangent at P to the circle with centre O. If $\angle QPB = 60^\circ$, the $\angle POQ$ is

- a. 120°
- b. 90°
- c. 100°
- d. 60°



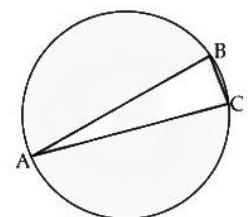
43. AP is the tangent to a circle with centre O as shown in the figure. If $\angle P = 45^\circ$ and radius of the circle is 5cm, the OP is equal to

- a. 5 cm
- b. 10 cm
- c. 9 cm
- d. $5\sqrt{2}$ cm



44. In the figure, AC is a diameter, $\angle A = 35^\circ$ the $\angle C$ is equal to:

- a. 90°
- b. 35°
- c. 70°
- d. 55°

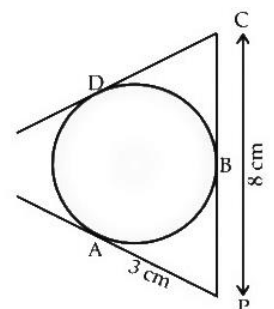


45. In a circle of radius 5 cm, the distance of a chord of length 8cm from the centre is:

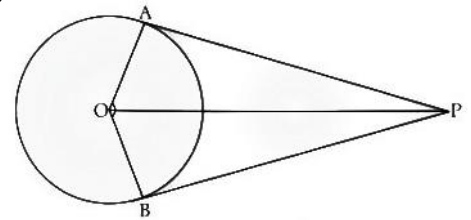
- a. 4 cm
- b. 13 cm
- c. 2.5 cm
- d. 3 cm

46. In the figure, AP = 3 cm and PC = 8cm, then the length of the tangent CD is:

- a. 11 cm
- b. 5 cm
- c. 7 cm
- d. 8 cm



47. In the figure, PA and PB are the tangents and $\angle AOB = 140^\circ$
 Then the measure of $\angle APO$ is

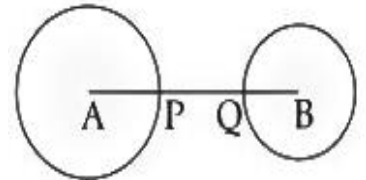


- a. 90° b. 40° c. 20° d. 180°

48. A tangent is drawn to a circle of radius 8 cm from a point which is at a distance of 10 cm from the centre of the circle. Then the length of the tangent is:

- a. 8 cm b. 18 cm c. 2 cm d. 6 cm

49. Two circular discs of radii 4.5 cm and 2 cm are fixed to a string of length 10 cm as shown. Then the diameter of another disc which touches the circular discs at P and Q is:



- a. 6.5 cm b. 2.5 cm
 c. 1.75 cm d. 3.5 cm