**MATHEMATICS**

**CIRCLES**

Two chords AB and CD of a circle intersect at E such that AE = 2.4 cm, BE = 32. cm and CE = 1.6 cm. The length of DE is@1.6 cm@3.2 cm@4.8 cm@6.4 cm@C

The locus of the middle points of equal chords of a circle with centre at O is @a straight line @a circle with centre different from O @a circle with centre at O @a circle intersecting the given circle at end of the chord@ D

If a regular hexagon is inscribed in a circle of radius r, then its perpendicular is @3r@6r@9r@12r@B

<img src="17\_Q.gif" >@18°@23°@41°@67°@C

Two circles of radii 20 cm and 37 cm intersect in A and B. If O<sub>2</sub> and O<sub>2</sub> are their centres and AB = 24 cm, then the distance O<sub>1</sub> O<sub>2</sub> is equal to@44 cm@51 cm@40.5 cm@45 cm@B

AB and CD are two chords of a circle intersecting at the point P outside the circle. If PA = 12 cm, CDE = 7 cm and PC = 15 cm, then AB is equal to@15.5 cm@4 cm@8 cm@10 cm@ A

If tangents QR, PR, PQ and drawn respectively at A, B, C to the circle circumscribing an acute-angle ∠ABC so as the form another △PQR, then the ∠RPQ is equal to@∠BAC @180°-∠BAC@1/2 (180° - ∠BAC)@180° - 2∠BAC@A

Three wires of length l<sub>1</sub>,l<sub>2</sub>, l<sub>3</sub> form a triangle surmounted by another circular wire, if l<sub>3</sub> is the diameter and l<sub>3</sub> = 2l<sub>1</sub> then the angle between l<sub>1</sub> and l<sub>3</sub> will be @30°@60°@45°@90°@B

<img src="9\_Q.gif" >@30° @45° @60° @90°@A

From a point Q, the length of the tangent to a circle is 24 cm and the distance of Q from the centre is 25 cm. The radius of the circle is@7 cm@12 cm@15 cm@24.5cm@ A

<img src="11\_Q.gif">@60°@70° @80° @90° @B

If tangents PQ and PB from a point P to a circle with centre O are inclined to each other at angle of 80°, then ∠POA is equal to@50°@60°@70°@80°@ A

<img src="13\_Q.gif" >@30°@90°@120°@60°@ D

<img src="14\_Q.gif" >@45°@70°@55°@35°@ C

The length of the tangent drawn from a point 8 cm away from the centre of a circle of radius 6 cm is@√7cm @<img src="15\_A2.gif" >@10 cm@5 cm@ B

A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q, so that OQ = 12 cm. Length of PQ is :@12 cm@13cm@8.5 cm@√119 cm @D

If tangents PA and PB from a point P to a circle with centre O are inclined to each other at an angle of 80° then ∠POA is equal to@50°@60°@70°@80°@ A

Two circle touch each other externally at C and AB is a common tangent to the circle. Then ∠ACB = @ 60° @ 45° @ 30° @ 90°@ D

ABC is a right angled triangle, right angled at B such that BC = 6 am and AB = 8 cm. A circle with centre O is inscribed in ABC. The radius of the circle is @1 cm@ 2 cm@3 cm@4 cm@ B

A point P is 10 cm from the centre of a circle. The length of the tangent drawn from P to the circle is 8 cm. The radius of the circle is equal to@4 cm@5 cm@6cm@None of these@ C

A point P is 25 cm from the centre of a circle. The radius of the circle is 7 cm and length of the tangent drawn from P to the circle is x cm. The value of x =@20 cm@24 cm@18 cm@12 cm. @ B

<img src="22\_Q.gif" >@75°@85°@95°@105°@ D

<img src="23\_Q.gif" >@55°@65°@75°@85°@ A

<img src="24\_Q.gif" >@8 cm@12cm@10cm @6cm@ B

A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q such that OQ = 12cm. Length PQ is@12 cm@13 cm@8.5cm@√119cm@ D

From a point Q, the length of the tangent to a circle is 24 cm and the distance of Q from the centre is 25cm. The radius of the circle is@7 cm @12 cm @15cm@ 24.5 cm@ A

The length of the tangent from a point A at a circle, of radius 3 cm, is 4 cm. The distance of A from the centre of the circle is@√7cm @7 cm@ 5 cm@ 25cm@ C

If tangents PA and PB from a point P to a circle with centre O are inclined to each other at an angle of 80° then ∠POA is equal to@50° @60° @70° @80° @ A

If TP and TQ are two tangents to a circle with centre O so that ∠POQ = 110°, then, ∠PTQ is equal to@60°@70°@80°@90°@ B

PQ is a tangent to a circle with centre O at the point P. If OPQ is an isosceles triangle, then ∠OQP is equal to@30° @45° @60° @90°@ B

Two circle touch each other externally at C and AB is a common tangent to the circles. Then, ∠ACB = @60°@45°@30°@90°@ D

ABC is a right angled triangle, right angled at B such that BC = 6 cm and AB = 8 cm. A circle with centre O is inscribed in △ABC. The radius of the circle is@1 cm@2 cm@3 cm@ 4 cm@ B

PQ is a tangent drawn from a point P to a circle with centre O and QOP is a diameter of the circle such that ∠POR = 120°, then ∠OPQ is@60°@45°@30°@90°@ C

If four sides of a quadrilateral ABCD are tangential to a circle, then@ AC + AD = BD + CD@AB + CD = BC + AD@AB + CD = AC + BC@AC + AD = BC + DB@ B

The length of the tangent drawn from a point 8 cm away from the centre of a circle of radius 6 cm is @√7cm@2√7 cm@10 cm@5 cm@ B

AB and CD are two common tangents to circles which touch each other at C. If D lies on AB such that CD = 4 cm, then AB is equal to@4 cm@6 cm@8 cm@12 cm@ C

<img src="37\_Q.gif" >@ AD = AB + BC + CA@ 2AD = AB + BC + CA@ 3AD = AB + BC + CA@ 4AD = AB + BC + CA@ B

If the diagonals of cyclic quadrilateral are equal, then the quadrilateral is@ rhombus@square@rectangle@none of these@ C

The quadrilateral formed by angle bisectors of a cyclic quadrilateral is a@ rectangle@square@parallelogram@cyclic quadrilateral@ D

<img src="40\_Q.gif" >@30°@60°@45°@25°@ C

<img src="41\_Q.gif" >@100°@80°@90°@75°@ B

<img src="42\_Q.gif" >@15 cm@10 cm@9 cm@6 cm@ C

<img src="43\_Q.gif" >@8: 7@7: 8@5: 4@1: 1@ D

<img src="44\_Q.gif" >@25o@30o@45o@60o@ B

<img src="45\_Q.gif" >@35o@85o@115o@90o@ C

<img src="46\_Q.gif" >@6 cm@4 cm@2 cm@3 cm@ B

<img src="47\_Q.gif" >@12cm@10 cm@9 cm@6 cm@ B

<img src="48\_Q.gif" >@7/4m@11/4 cm@9/4 cm@ can’t be determined@ C

Two circles of radii 13 cm and 5 cm touch internally each other. Find the distance between their centres:@18 cm@12 cm@9 cm@8 cm@ D

Three circles touch each other externally. The distance between their centre is 5 cm. 6 cm and 7 cm. Find the radii of the circles :@2 cm, 3 cm, 4 cm@3 cm, 4 cm, 1 cm@ 1 cm, 2.5 cm, 3.5 cm@1 cm, 2 cm, 4 cm@ A

If AB is a chord of a circle, P and Q are two points on the circle different from A and B, then:@the angle subtended by AB at P and Q are either equal or supplementary.@ the sum of the angles subtended by AB at P and Q is always equal two right angles.@ the angles subtended at and Q by AB are always equal.@ the sum of the angles subtended at P and Q is equal to four right angles.@ A

<img src="52\_Q.gif" >@120°@90°@360° @180°@ D

In a circle of radius 5 cm, AB and AC are the two chords such that AB = AC = 6 cm. Find the length of the chord BC.@4.8 cm@10.8 cm@9.6 cm@ none of these@ C

In a circle of radius 17 cm, two parallel chords are drawn on opposite sides of a diameter. The distance between the chords is 23 cm. If the length of one chord is 16 cm, then the length of the other is:@23 cm@30 cm@15m cm@ none of these@ B

If two circles are such that the centre of one lies on the circumference of the other, then the ratio of the common chord of two circles to the radius of any of the circles is:@√3: 2@ √3:1@√5:1@none of these@ B

Two circles touch each other internally. Their radii are 2 cm and 3 cm. The biggest chord of the other circle which is outside the inner circle, is of length:@2√2 cm @3√2cm@2√3cm@4√2cm @ D

Through any given set of four points P, Q, R, S it is possible to draw:@almost one circle @exactly one circle @exactly two circles @exactly three circles@ A

The distance between the centers of equal circles each of radius 3 cm is 10 cm. The length of a transverse tangent is: @4 cm@6 cm@8 cm@10 cm@ C

The number of common tangents that can be drawn to two given circles is at the most: @1@2@3@4@ B

<img src="60\_Q.gif" >@ 1 cm@1.25 cm@1.5 cm @none of these@ A

A circle has two parallel chords of lengths 6 cm and 8 cm. If the chords are 1 cm apart and the centre is on the same side of the chords, then a diameter of the circle is of length: @5 cm@6 cm@8 cm@10 cm@ D

<img src="62\_Q.gif" >@30°@50° @40°@None of these @ C

<img src="63\_Q.gif" >@40° @55° @50° @65°@ D

<img src="64\_Q.gif" >@AC + AB = BC @3AE = AB + BC + AC@ AB + BC + AC = 4AE@ 2AE = AB + BC + AC@ D

<img src="65\_Q.gif" >@105 cm@141.4 cm@138.6 cm @Can’t be determined@ B

<img src="66\_Q.gif" >@ 80° @120°@140°@Can’t be determined@ C

<imgsrc="67\_Q.gif">@√3/2r<sup>2</sup>2@3√3r<sup>2</sup>@√3r<sup>2<@None of these@ C

<img src="68\_Q.gif" >@15 cm@21 cm@24 cm @Can’t be determined@ C

<img src="69\_Q.gif" >@ 22/7@ 7/22@ 7/12@ Can’t be determined@ B

<img src="70\_Q.gif" >@30°@20°@60°@None of these@ A

<img src="71\_Q.gif" >@1 cm@3 cm@4 cm@ Can’t be determined@ A

<img src="72\_Q.gif" >@55°@110°@120°@Data insufficient @ C

<img src="73\_Q.gif" >@125°@65°@115°@None of these @ C

<img src="74\_Q.gif" >@65°@125°@85°@Can’t be determined@ D

<img src="75\_Q.gif" >@30°@75°@65°@Can’t be determined @C

<img src="76\_Q.gif" >@60°@ 50°@20°@ Can’t be determined@ C

<img src="77\_Q.gif" >@9 cm@12 cm@6 cm@8√2cm@ C

<img src="78\_Q.gif" >@20 cm@24 cm@16 cm@ None of these@ A

<img src="79\_Q.gif" >@5/2 cm@ 5√/2 cm@5 cm@5√3/4 cm@ C

<img src="80\_Q.gif" >@50° @70° @35°@90° @B

<img src="81\_Q.gif" >@70°@50° @35° @90° @C

<img src="82\_Q.gif" >@35° @45° @90° @55° @A

<img src="83\_Q.gif" >@25° @60°@45° @30°@D

In the given figure, O is the centre of the circle. The value of x is:@140°@70°@290°@210°@A

A quadrilateral ABCD is inscribed in a circle such that AB is a diameter and ∠ADC = 130°. Find ∠BAC@40°@70° @60° @90°@A

<img src="86\_Q.gif" >@1 cm, 2 cm, 7 cm, 10 cm @2 cm, 2 cm, 10 cm, 10 cm@2 cm, 1 cm, 8 cm, 8 cm @3 cm, 2 cm, 8 cm, 10 cm@ B

Find the angle marked as x in each of following figures where O is the centre of the circle @110°@55° @90° @45°@ B

A, B, C are three points on the circumference of a circle with centre O such that ∠OAC = 53° and ∠CBO = 32°, then ∠AOB = @100°@120°@150°@170°@D

<img src="89\_Q.gif" >@60° @65°@ 70°@75°@B

<img src="90\_Q.gif" >@13°@6°@45°@None of these@ A

<img src="91\_Q.gif" >@35°@55°@45°@25°@D

<img src="92\_Q.gif" >@45°@135°@150°@90°@D

One circle has a radius of 5 and its centre at (0, 5). A second circle has a radius of 12 and its centre at (12, 0). What is the length of a radius of a third circle which passes through the centre of the second circle and both the points of intersection of the first two circles.@13@15@13/2@15/2@ C

<img src="94\_Q.gif" >@86° @87° @88° @89°@ B

<img src="95\_Q.gif" >@45°@60° @90°@135°@ C

Let ABCD be a square of side length l, and a circle passing through B and C, and touching AD. The radius of circle is@3/8@1/2@1√1/2@5/8@D

<img src="97\_Q.gif" >@25°@30°@40°@50°@A

In figure, if PQR is the tangent to a circle at Q whose centre is O, AB is a chord parallel to PR and ∠­BQR = 70°, then ∠­AQB is equal to @20°@40°@35°@ 45°@B

<img src="99\_Q.gif" >@62.5° @45°@35° @55@D

<img src="100\_Q.gif" >@65°@60°@50°@40°@C

<img src="101\_Q.gif" >@4 cm@2 cm@2√3 cm@4√3cm

<img src="102\_Q.gif" >@100°@80°@90°@75°@A