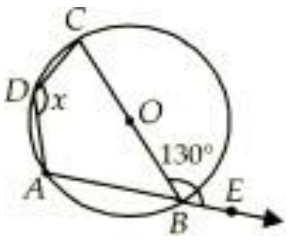
ACHIEVERS FOUNDATION

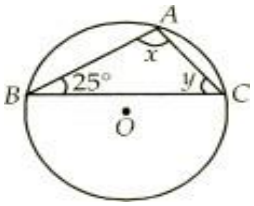
CLASS-9TH

CIRCLES- WORK SHEET

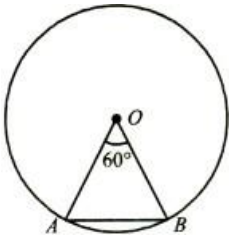
1. If PQ is a chord of a circle with radius r units and R is a point on the circle such that angle PRQ = 90^0 then the length of PQ is?
2. If an equilateral triangle PQR is inscribed in a circle with centre O , then angle QOR is equal to ?
3. ABCD is a cyclic quadrilateral with centre O in the given figure. Chord AB is produced to E where angle CBE = 130^0 the value of x is equal to.



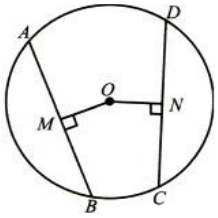
4. In the given figure, O is the centre of the circle. For what values of x and y , chord BC will pass through the centre of circle where points A, B and C are on the circle?



5. In the given figure, chord AB subtends angle AOB equal to 60c at the centre of the circle. If OA = 5 cm, then length of AB (in cm) is ?



6. In the given figure, O is the centre of a circle. AB and CD are its two chords. If OM = ON , then prove that AB = CD



7. In a cyclic quadrilateral, the difference between two opposite angles is 58c, the measures of opposite angles are
8. Equal chords of a circle subtend equal angles at

(a) centre (b) circumference (c) Both (a) and (b) (d) None of these

9. Diagonals of a cyclic quadrilateral are the diameters of that circle, then quadrilateral is a

(a) parallelogram (b) trapezium (c) rectangle (d) None of these

10. There is one and only one circle passing through three given…….. points

(a) collinear (b) non-collinear (c) far-off (d) nearest

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DIRECTION : In each of the following questions, a statement of Assertion is given followed by a corresponding statement of Reason just below it. Of the statements, mark the correct answer as

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Assertion is false but reason is true.

11. **Assertion :** The length of a chord which is at a distance of 5 cm from the centre of a circle of radius 10 cm is 17.32 cm.

Reason : The perpendicular from the centre of a circle to a chord bisects the chord.

12. **Assertion :** The circumference of a circle must be a positive real number.

Reason : If r(> 0) is the radius of the circle, then its circumference 2p r is a positive real number.

13. **Assertion :** Given a circle of radius r and with centre O. A point P lies in a plane such that OP > r then point P lies on the exterior of the circle.

Reason : The region between an arc and the two radii, joining the centre of the end points of the arc, is called a sector.

14. **Assertion :** In a cyclic quadrilateral ABCD, angle A – angle C = 60c, then the smaller of two is 60^0.

Reason : Opposite angles of cyclic quadrilateral are supplementary.

15. **Assertion :** Two diameters of a circle intersect each other at right angles. Then the quadrilateral formed by joining their end-points is a square.

Reason : Equal chords subtend equal angles at the centre.

16. **Assertion :** If P and Q are any two points on a circle, then the line segment PQ is called a chord of the circle.

Reason : Equal chords of a circle subtend equal angles at the centre.

17. **Assertion :** The sum of either pair of opposite angles of a cyclic quadrilateral is 180c.

Reason : Two or more circles are called concentric circles if and only if they have different centre and radii.