



# VIDYA BHARATI SCHOOL

OLYMPIAD WORKSHEET: December - 2017

GRADE: IX

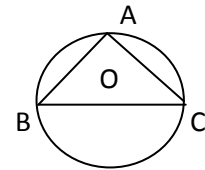
SUBJECT: MATHEMATICS

Write the correct answer in each of the following:

- The radius of a circle is 13 cm and the length of one of its chords is 10 cm. The distance of the chord from the centre is  
a) 11.5 cm    b) 12 cm    c)  $\sqrt{69}$  cm    d) 23 cm

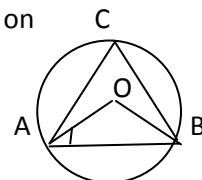
- A chord is at a distance of 8 cm from the centre of a circle of radius 17cm. The length of the chord is  
a) 25 cm    b) 12.5 cm    c) 30 cm    d) 9 cm

- In the given figure, BOC is a diameter of a circle and  $AB=AC$ . Then,  $\angle ABC = ?$   
a)  $30^\circ$     b)  $45^\circ$     c)  $60^\circ$     d)  $90^\circ$



- In the given figure, O is the centre of a circle. If  $\angle ACB=30^\circ$ . Then  $\angle AOB = ?$   
a)  $30^\circ$     b)  $15^\circ$     c)  $60^\circ$     d)  $90^\circ$

- In the given figure, O is the centre of a circle. If  $\angle OAB = 40^\circ$  and C is a point on the circle, then  $\angle ACB = ?$



- The circumference of a circle is 60 cm. The length of an arc of  $90^\circ$  is  
a) 10 cm    b) 15 cm    c) 20 cm    d) none of these
- A circle is divided into 12 equal parts. The number of degrees in each arc is  
a)  $30^\circ$     b)  $60^\circ$     c)  $45^\circ$     d) none of these
- An equilateral triangle XYZ is inscribed in a circle with centre O. The measure of  $\angle XOY$  is  
a)  $120^\circ$     b)  $60^\circ$     c)  $45^\circ$     d)  $90^\circ$
- A diameter of a circle is also a  
a) Tangent    b) chord    c) secant    d) arc
- The number of tangents that can be drawn to a circle at a given point on it is  
a) 2    b) 1    c) 3    d) 0

11. Greatest chord of a circle is called its  
a) Radius    b) secant    c) chord    d) diameter
12. Angle formed in minor segment of a circle is  
a) a right angle    b) an obtuse angle    c) an acute angle    d) a straight angle
13. Number of circles that can be drawn through three non-collinear points is  
a) 2    b) 3    c) 1    d) 0
14. AB is a chord of a circle with radius 'r'. If P is any point on the circle such that  $\angle APB$  is a right angle then AB is equal to  
a) r    b) 2r    c) 3r    d)  $r^2$
15. If AB= 12 cm, BC= 16 cm and AB is perpendicular to BC, then the radius of the circle passing through the points A,B and C is  
a) 12 cm    b) 6 cm    c) 8 cm    d) 10 cm
16. If a chord of a circle is equal to its radius, then the angle subtended by this chord in major segment is  
a)  $30^\circ$     b)  $45^\circ$     c)  $60^\circ$     d)  $90^\circ$
17. The region between chord and either of the arc is called  
a) A quarter circle    b) a semicircle    c) a segment    d) a sector
18. An equilateral triangle of side 9cm is inscribed in a circle. The radius of the circle is  
a) 3 cm    b)  $3\sqrt{2}$  cm    c)  $3\sqrt{3}$  cm    d) 6 cm
19. The angle in a semicircle measures  
a)  $45^\circ$     b)  $60^\circ$     c)  $90^\circ$     d)  $36^\circ$
20. Angles in the same segment of a circle are  
a) Equal    b) complementary    c) supplementary    d) none of these