	INDIAN SCHOOL AL WADI AL KABIR	

Class: XI	**Department: SCIENCE – 2022-2023** **SUBJECT: ENGINEERING GRAPHICS**	**Date of Completion: 21.08.22**
Worksheet No:2 With Answers	**Topic: CIRCLES AND ITS CIRCUMFERENCE**	**Note: A4 FILE FORMAT**
NAME OF THE STUDENT:	**CLASS: XI SECTION:C**	**ROLL NO:**

1. Given the arc AB , complete the circle.

2. Find the centre of a given circle.

3. Draw a circle passing through three given points A,B and C which are not in a straight line.

4. Contruct an equilateral triangle of 60 mm and inscribe a circle in it.

5.Construct a square ABCD with diagonal AC = 80 mm and inscribe a circle in it.

6.Construct a regular pentagon with base AB = 50 mm using protractor,now inscribe a circle in it.

7. Construct a regular hexagon with base AB = 40 mm using protractor,now inscribe a circle in it.

MULTIPLE CHOICE QUESTIONS

1. Half of diameter is called ----------

a) Tranversal

b) Radius

c)sector

d) Tangent

2.The diameter divides the circle into two equal halves ,and each of them is called----------

a)chord

b)semi circle

c) quadrant

d) secant

3.Circles having a common centre is called ----------

a) Transversal

b) Eccentric circles

c)Concentric circles

d)None of the above

4. In engineering graphics many machine parts such as bearings, pulleys and gears are --------- in shape.

a) Circular

b)Triangular

c) Hexagonal

d) Pentagonal

5.The angle in a semi circle will be a --------

a) acute angle

b) Right angle

c) Obtuse angle

d)None of the above

6.For the construction of a regular pentagon the angle is ----------

a)108 degree

b)120 degree

c) 90 degree

d) 180 degree

7. For the construction of a regular hexagon the angle is ----------

a) 90 degree

b)120 degree

c) 130 degree

d) None of the above

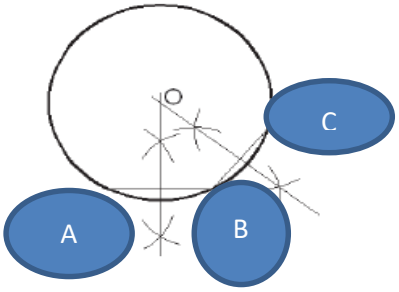
ANSWERS

MULTIPLE CHOICE QUESTIONS

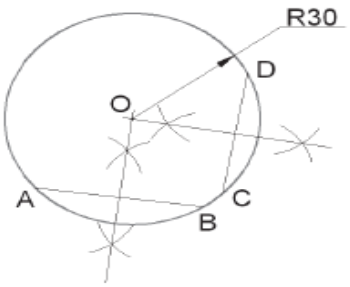
1. b) Radius
2. b) Semicircle
3. c) Concentric circles
4. a) Circular
5. b) Right angle
6. a) 108 degree
7. b) 120 degree

LONG ANSWERS WITH SOLUTION

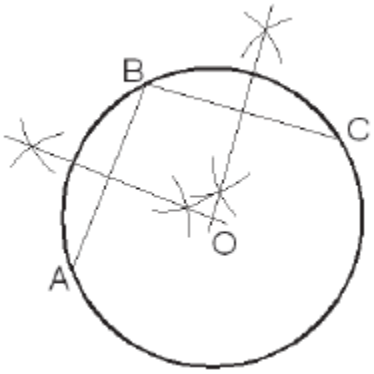
1. Hint : Draw two chord in the arc,bisect and find the centre and complete the circle.



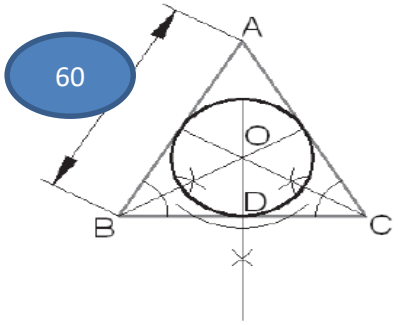
2. Hint : Draw two chords and bisect the chords to get centre of the circle.



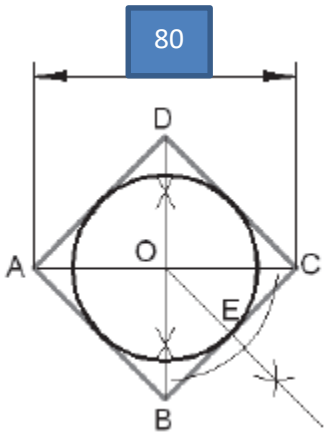
3. Hint : Join 3 points A,B,C which are not in a straight line ,bisect the lines and with the centre O, draw the circle.



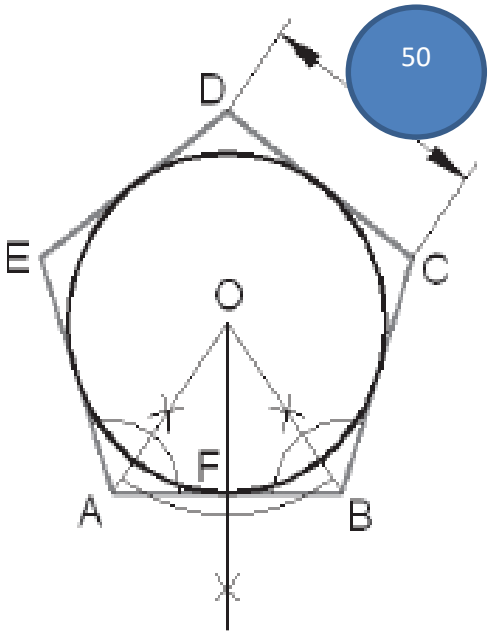
4. Hint : Draw equilateral triangle and bisect the angle and find the centre and inscribe a circle in it.



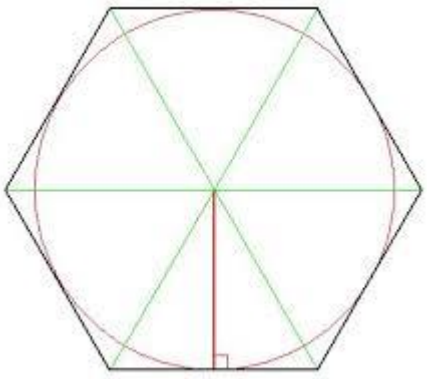
5. Hint: Draw an inclined square with diagonal AC = 80 mm, draw a perpendicular OE from the point O, O as Centre and OE as radius draw a circle inside the square.



6. Hint: Draw a regular pentagon using protractor and find the angle bisector of ∠EAB and ∠ABC to intersect at O. From O draw a perpendicular (OF) to side AB, Now with O as Centre and OF radius, draw a circle to touch all the sides of the pentagon.



7. Hint: Draw the regular hexagon whose base AB = 40 mm, join opposite corners to obtain the other two diagonals to cut at O. From O drop a perpendicular OG on side AB, Now O as Centre and OG radius draw the required circle.



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