INDIAN SCHOOL AL WADI AL KABIR

Class: XI	**Department: SCIENCE 2020 -2021** **SUBJECT : ENGINEERING GRAPHICS**	**Date of completion:** **21.05.2020**
Worksheet No:2 **With answers**	**Topic: CIRCLES & TANGENTS**	**Note: A4 FILE FORMAT**
NAME OF THE STUDENT	**CLASS SECTION**	**ROLL NO.**

1.Draw a tangent to the circle with centre O from a point P given in its circumference.

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.Draw a direct common tangent to two equal circles 0f 20 mm diameter , having their centres O and C 25 mm apart.

5.Draw a tranversal and direct common tangent to two unequal circles O1 and O of 50mm and 40 mm diameters touching each other in A.

6.Construct a square ABCD with diagonal AC = 60 mm and inscribe a circle in it.

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

8. Construct a regular hexagon with base AB = 30 mm using protractor,now inscribe a circle in it.

MULTIPLE CHOICE QUESTIONS

1.----------is the tangent to two circles crossing the line joining their centres.

a) Tranversal

b)Common tangent

c)sector

d) diameter

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.A straight line touching a circle or an arc at one point only , is called a -------

a)Secant

b)Tangent

c)Transversal

d)None of the above

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

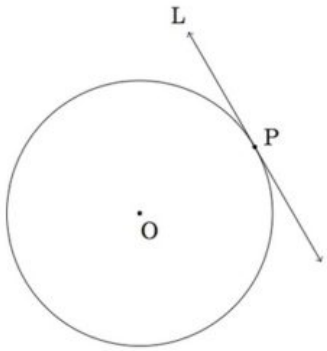
ANSWERS

MULTIPLE CHOICE QUESTIONS

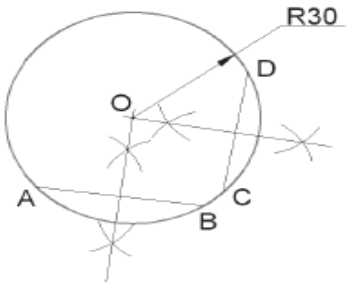
1. a) Transversal
2. b) Semicircle
3. c) Concentric circles
4. b) Tangent
5. b) Right angle
6. a) 108 degree
7. b) 120 degree

LONG ANSWERS WITH SOLUTION

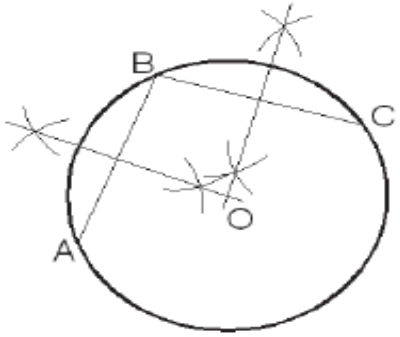
1. Hint : Draw circle and construct a tangent to the circle



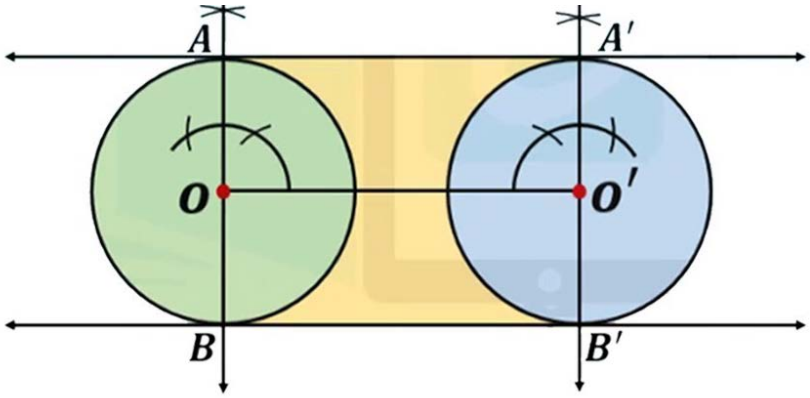
2. Hint : Draw two chords and bisect the chords to get centre of the circle.



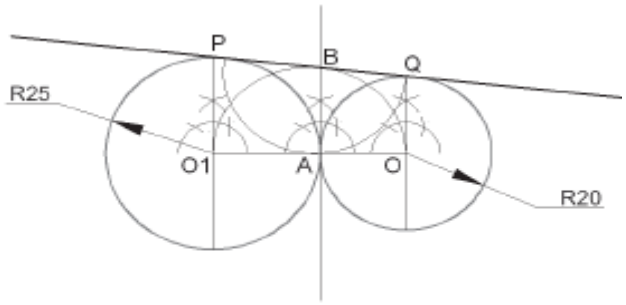
3. Hint : Join 3 points A,B,C which are not in a straight line ,bisect the lines and with the centre O, draw the circle.



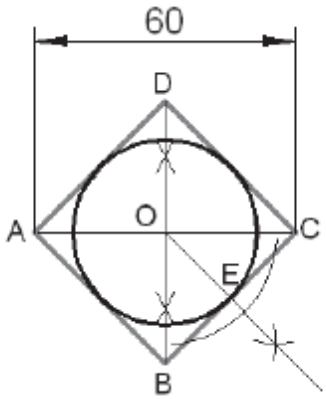
4. Hint : Draw two circles with given diametre and centres 25 mm apart,draw perpendiculars from the centres, through the point on the circumfernce draw tangents.



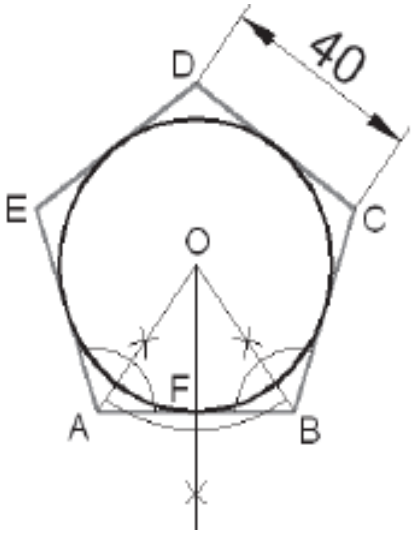
5. Hint : Draw two unequal circles with given diametre touching each other in A,draw the common tangent and transversal.



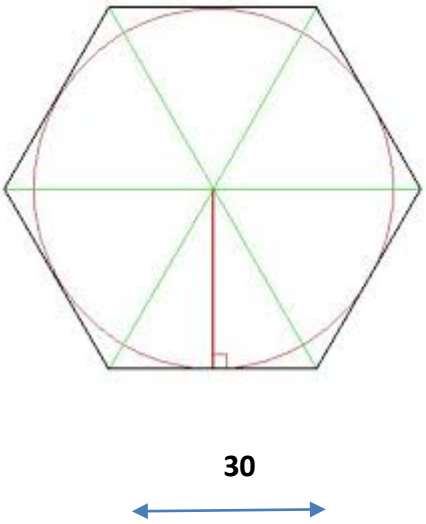
6. Hint: Draw a inclined square with diagonal AC = 60 mm, draw a perpendicular OE from the point O, O as Centre and OE as radius draw a circle inside the square.



7. 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.



8. Hint: Draw the regular hexagon whose base AB = 30 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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