



# ST. LAWRENCE HIGH SCHOOL



## A Jesuit Christian minority Institution

Subject: Mathematics

Class- X

Date:12/06/2020

### Answer key of Worksheet-35

#### Chapter- Theorem on tangents to circles

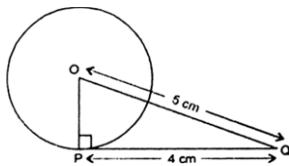
#### Topic- Thorem on Tangents to Circles

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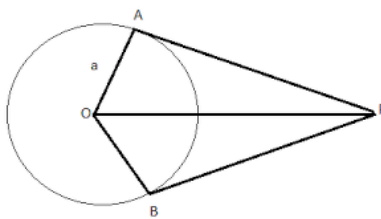
1. Choose the correct alternative.

1x15=15

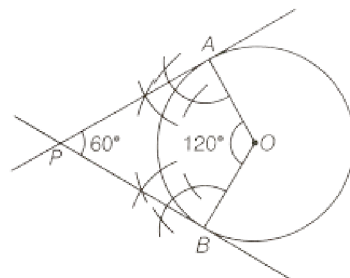
a) Find diameter of the circle below, i) 9 cm ii) 8 cm **iii) 6 cm** iv) none of these



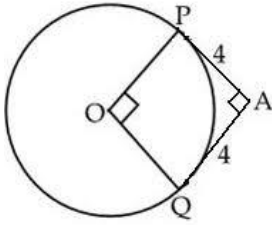
b) If  $\angle AOB = 120^\circ$ , find  $\angle OPB$  i)  $25^\circ$  **ii)  $30^\circ$**  c)  $45^\circ$  iv)  $60^\circ$



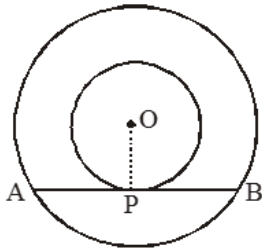
c) If O and P are joined in the following figure, find  $\angle AOP$ , **i)  $60^\circ$**  ii)  $70^\circ$  iii)  $30^\circ$  iv) none of these



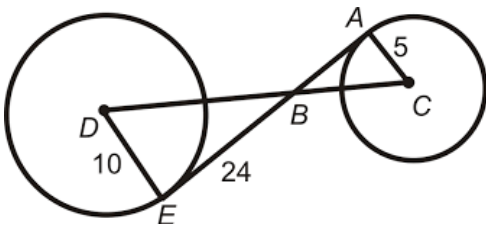
- d) If radius of the given circle is 4 units, OPAQ is a i) rectangle ii) rhombus **iii) square**  
 iv) none of these



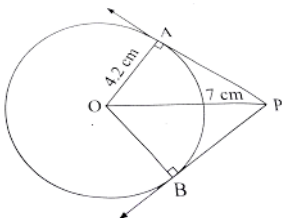
- e) If  $AP = 4$  cm and  $OP = 3$  cm, find the radius of the bigger circle i) **5 cm** ii) 25 cm iii) 6 cm  
 iv) none of these



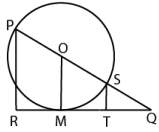
- f) Find DC when  $AB = 12$  units and  $BE = 24$  units i) 30 units **ii) 39 units** iii) 40 units iv) none of these



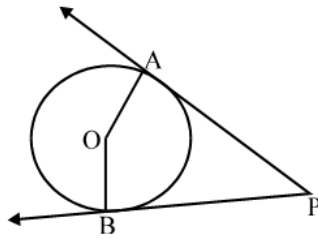
- g) Find Length of BP, i) **5.6 cm** ii) 4.6 cm iii) 5 cm iv) none of these



h) If  $PR \parallel OM \parallel ST$ , find  $\angle PRQ$  i)  $87^\circ$  ii)  $90^\circ$  iii)  $92^\circ$  iv) none of these



i) Find  $\angle APB$  if  $\angle AOB = 130^\circ$  i)  $50^\circ$  ii)  $60^\circ$  iii)  $40^\circ$  iv) none of these



j) A tangent drawn to a circle with centre O from an external point A touches the circle at the point B. If  $OB = 5$  cm,  $AO = 13$  cm then length of AB is i)  $12$  cm ii)  $13$  cm iii)  $6.5$  cm iv)  $6$  cm

k) Two circles touch each other externally at the point C, A direct common tangent AB touch the two circles at the points A and B. Value of  $\angle ACB$  is i)  $60^\circ$  ii)  $45^\circ$  iii)  $30^\circ$  iv)  $90^\circ$

l) If the length of the radius of the circle with centre O is 5 cm. P is a point at the distance of 13 cm from the point O. The length of two tangents are PQ and PR from the point P. The area of the quadrilateral PQOR is i)  $60$  sq cm ii)  $120$  sq cm iii)  $80$  sq cm iv) none of these

m) The length of radii of two circles are 5 cm and 3 cm, the two circles touch each other externally. The distance between two centres are i) 2 cm ii) 2.5 cm iii) 1.5 cm iv)  $8$  cm

n) The lengths of radii of two circles are 3.5 cm and 2 cm. The two circles touch each other internally, the distance between two centres is i) 5.5 cm ii) 1 cm iii)  $1.5$  cm iv) none of these

o) The lengths of radii of two circles are 8 cm and 3 cm and the distance between two centres is 13 cm. what is the length of the direct common tangent of two circles?

i) 8 cm ii)  $12$  cm iii) 15 cm iv) none of these

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