WANDOOR GANITHAM - S S L C UNIT TEST 2021

9.07AE   **TANGENTS**   Total Score : 25

Time : 45 minutes

(2 scores each for questions 1 to 3   )

1. There is a point 13 cm away from the centre of a circle of radius 5 cm . A tangent is

    drawn through that point .

   a) What is the angle between a tangent at a point and the radius through that point ?

   b) What is the length of the tangent   ?

2. In the figure chord AB is extended to meet the tangent

    through C at P .   PA = 9 cm , AB = 5 cm

   a) What is the length of PB ?

   b) What is the length of   PC ?
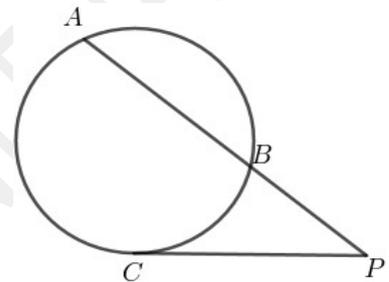
3. In the figure , A and B are the centres of the circles .

    Tangents are drawn from a point P to these

    circles . < CAD = 120⁰

   a) What is the measure of < CPD   ?

   b) What is the measure of < EBF   ?
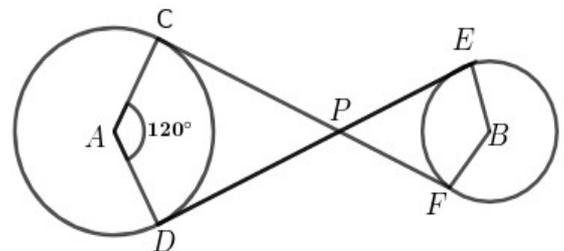
(3 scores each for questions 4 to 5   )

4. In the figure , the circle touches the sides of the triangle

    ABC at the points P , Q , R . AP = 5 cm , BQ = 4 cm

    CR = 3 cm .

   a) What is the length of AR ?

   b) What is the length of BC   ?

   c) What is the perimeter of the triangle ABC ?
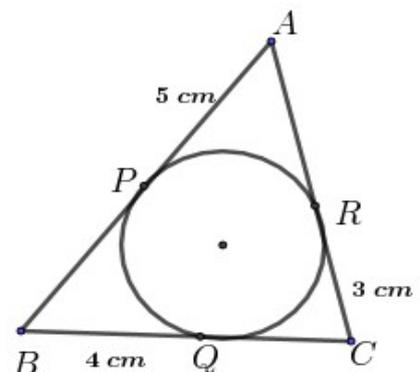
5. Draw a circle of radius 3   cm and mark a point 7   cm away from its centre.

 Draw the tangents to the circle from this point and measure their lengths .

6. In the figure , tangents through the points A and B intersect at P . PA = 7 cm .

 <APB = 40⁰   ,   AC = BC

 a) What is the length of   PB ?

 b) What is the measure of < ABP ?

 c) What is the measure of < ACB ?

 d) What is the measure of < CAP ?
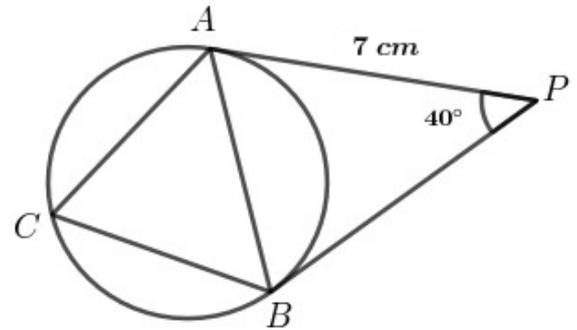
7. Draw a circle of radius 2 .5 cm . Draw a triangle of angles 50° , 60° , 70° with all its

  sides touching the circle .

8. In the figure PQ is a tangent . BE = CE

 < AEB = 30⁰ , < BCE= 70⁰

 a) What is the measure of < BDE ?

 b) What is the measure of < BAE ?

 c) What is the measure of < BAQ ?

 d) What is the measure of < PAE ?

 e) What is the measure of < ABC ?