

# WANDOOR GANITHAM - S S L C UNIT TEST 2021

9.07BE

## TANGENTS

Total Score : 25

Time : 45 minutes

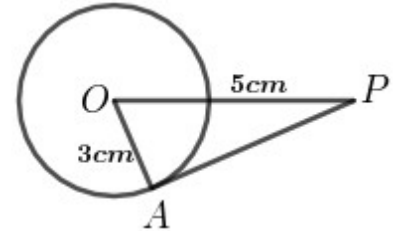
( 2 scores each for questions 1 to 3 )

1. In the figure ,O is the centre of the circle and AP is a tangent

OA = 3 cm , OP = 5 cm .

a) What is the measure of  $\angle OAP$  ?

b) What is the length of the tangent PA ?



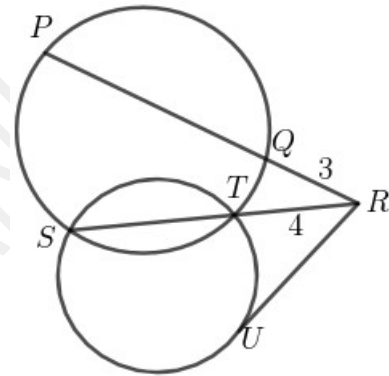
2. In the figure two circles intersect at S and T .

RU is a tangent .

PQ = 9 cm , QR = 3 cm , TR = 4 cm

a) What is the length of RS ?

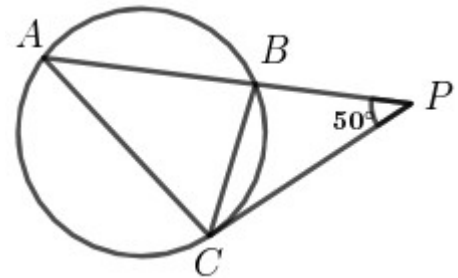
b) What is the length of RU ?



3. In the figure PC is a tangent . BC = BP ,  $\angle BPC = 50^\circ$

a) What is the measure of  $\angle BCP$  ?

b) What is the measure of  $\angle BAC$  ?



( 3 scores each for questions 4 to 5 )

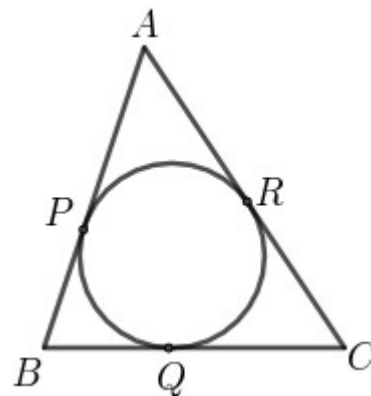
4) Draw a circle of radius 4 centimetres and mark a point 9 centimetres away from its centre .

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

5. Draw a circle of radius 2 cm . Draw a triangle of angles  $30^\circ$  ,  $70^\circ$  ,  $80^\circ$  with all its sides touching the circle .

( 4 scores each for questions 6 to 7 )

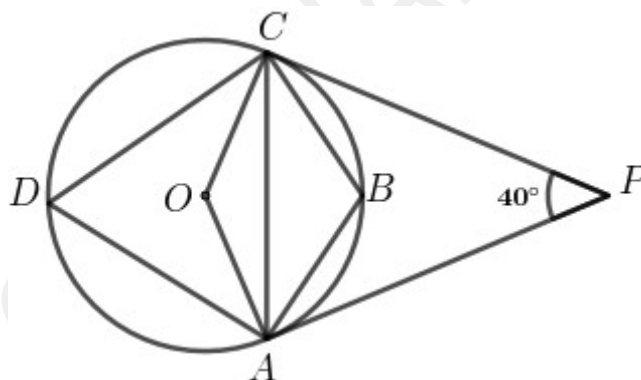
6. In the figure , the circle touches the sides of the triangle ABC at the points P, Q, R .  $AB = 12\text{ cm}$  ,  $BC = 10\text{ cm}$  ,  $AC = 14\text{ cm}$



- Which other line has the same length as that of AP ?
- If the length AP is taken as  $x$  , what is the length of BQ ?
- What is the value of  $x$  ?
- What are the lengths of the lines AR , BP and CQ ?

7. In the figure two tangents through the points A and C meet at P .  $\angle APC = 40^\circ$  ,  $AB = BC$

- What is the measure of  $\angle AOC$  ?
- What is the measure of  $\angle ADB$  ?
- What is the measure of  $\angle ABC$  ?
- What is the measure of  $\angle BAP$  ?



( Question 8 carries 5 scores )

8. In the figure , two circles intersect at P . CD is the common tangent of the circles .

Radius of the smaller circle is 4 centimetres and the radius of the larger circle is 9 centimetres . AE is perpendicular to BC .

- What is the measure of  $\angle ADC$  ?
- Prove that AECD is a rectangle ?
- What is the length of BE ?
- What is the length of AB ?
- What is the length of the tangent CD ?

