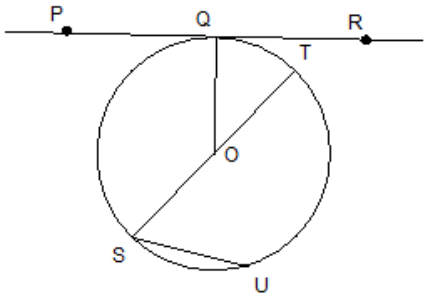
Section 8.1 & 8.2 Review

Multiple Choice

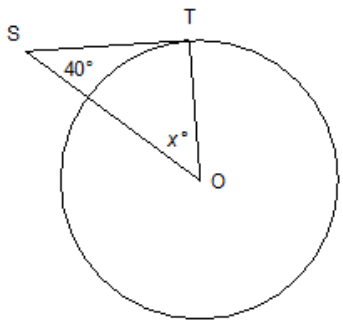
Identify the choice that best completes the statement or answers the question.

_____ 1. O is the centre of this circle.
Which line is a tangent?



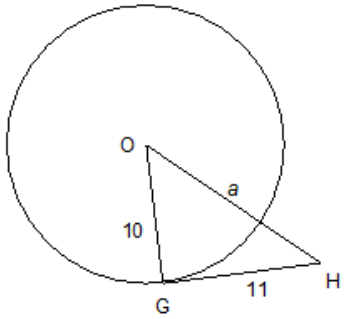
a. OQ b. ST c. PR d. SU

2. O is the centre of this circle and point T is a point of tangency. Determine the value of $x°$.



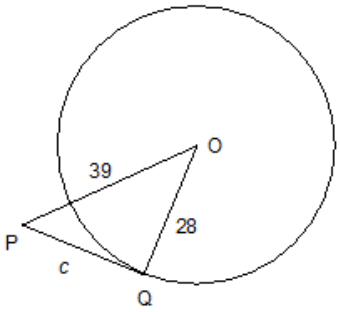
a. 90° b. 50° c. 130° d. 40°

3. O is the centre of this circle and point G is a point of tangency.
Determine the value of *a*. If necessary, give your answer to the nearest tenth.



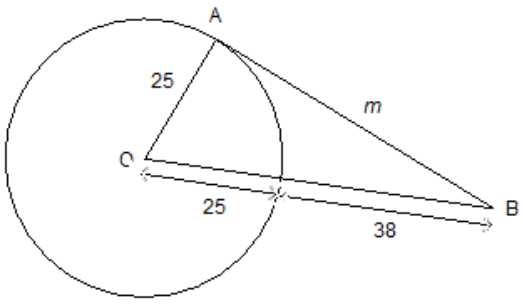
a. 11.3 b. 22.5 c. 4.6 d. 14.9

4. O is the centre of this circle and point Q is a point of tangency.
Determine the value of c. If necessary, give your answer to the nearest tenth.



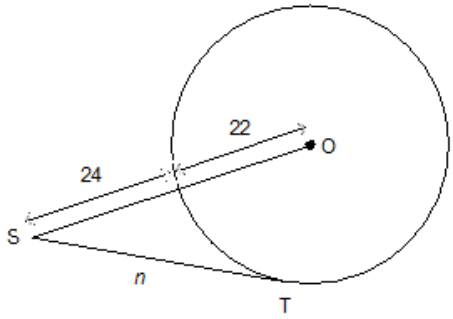
a. 48 b. 27.1 c. 11 d. 5.5

5. O is the centre of this circle and point A is a point of tangency.
Determine the value of m. If necessary, give your answer to the nearest tenth.



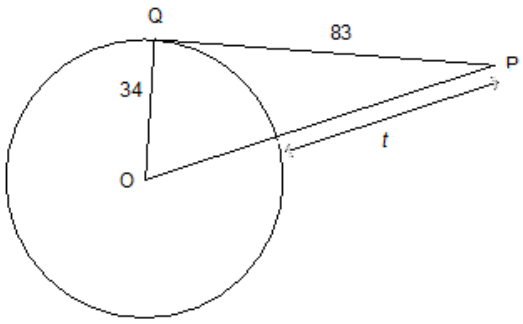
a. 38 b. 7.2 c. 67.8 d. 57.8

6. O is the centre of this circle and point T is a point of tangency.
Determine the value of n. If necessary, give your answer to the nearest tenth.



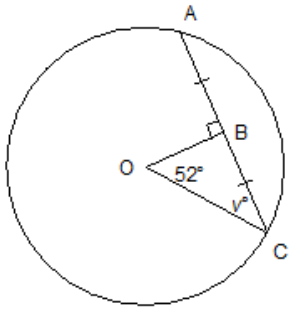
a. 5.7 b. 51 c. 24 d. 40.4

7. O is the centre of this circle and point Q is a point of tangency.
Determine the value of t. If necessary, give your answer to the nearest tenth.



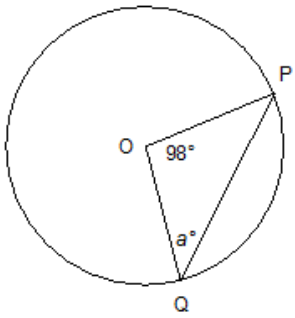
a. 61.3 b. 55.7 c. 55 d. 82.2

8. O is the centre of the circle.
Determine the value of $v°$.



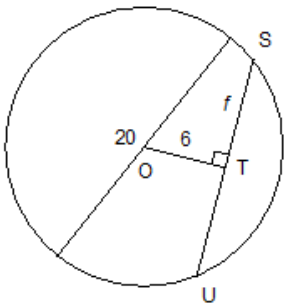
a. 19° b. 71° c. 52° d. 38°

9. O is the centre of the circle.
Determine the value of $a°$.



a. 49° b. 20.5° c. 41° d. 69.5°

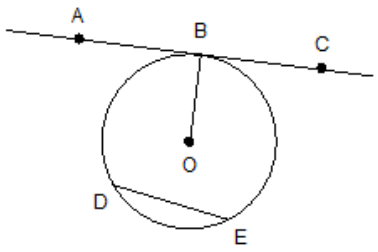
10. O is the centre of the circle.
Determine the value of f to the nearest tenth, if necessary.



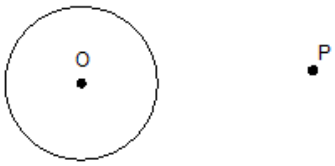
a. 4 b. 8 c. 64 d. 11.7

Short Answer

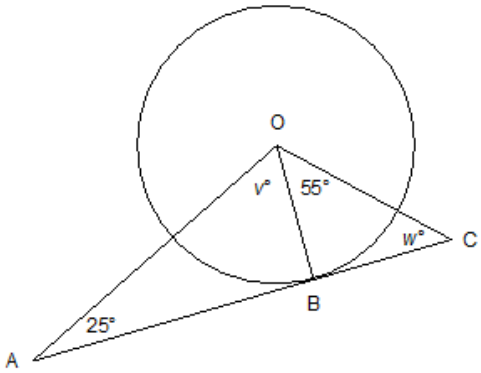
11. O is the centre of this circle.
Which line is a tangent?



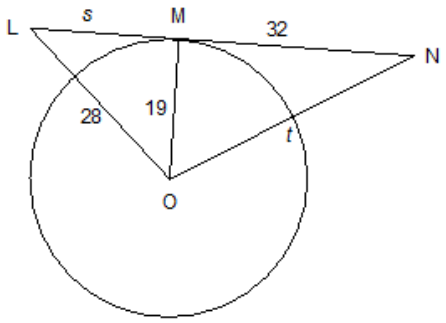
12. Draw a line through point P that is NOT a tangent to the circle.



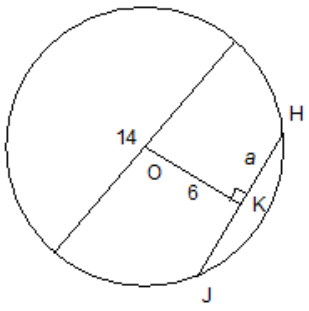
13. O is the centre of this circle and point B is a point of tangency. Determine the values of $v°$ and $w°$.



14. O is the centre of this circle and point Q is a point of tangency.
Determine the values of s and t. If necessary, give your answers to the nearest tenth.

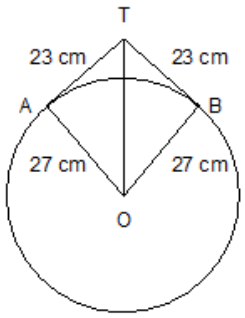


15. Point O is the centre of this circle. Without solving for a, sketch and label the length of any extra line segments you need to draw to determine the value of a.



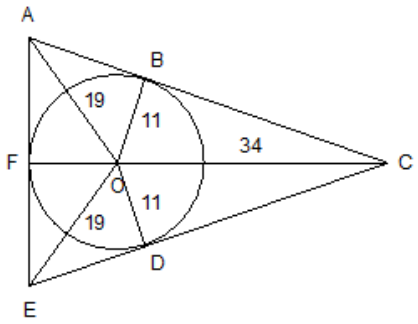
Problem

16. A circular mirror with radius 27 cm hangs from a hook.
The wire is 46 cm long and is a tangent to the circle at points A and B.
How far, to the nearest tenth, above the top of the mirror is the hook?

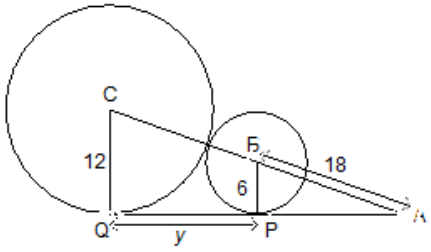


17. When are two tangent lines to a circle parallel? Draw a sketch to support your answer.

18. AC, AE, and CE are tangents to this circle. The points of tangency are: B, F, and D
The circle has radius 11. The distance from the centre of the circle to each vertex of the triangle is: OC = 34, OA = OE = 19
Determine the side lengths of △ACE, to the nearest tenth.



19. AQ is a tangent to the circle with centre B and to the circle with centre C.
The points of tangency are P and Q.
Determine the value of y to the nearest tenth.



20. A circle has diameter 32 cm. How far from the centre of the circle, to the nearest centimetre, is a chord 20 cm long?