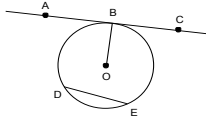
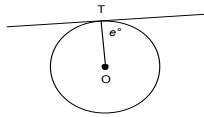


UNIT 8.1 – Practice Questions – TANGENTS – Pythagorean Theorem

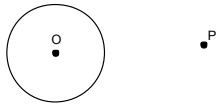
11. O is the centre of this circle.
Which line is a tangent?



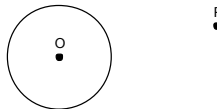
12. O is the centre of this circle. Point T is a point of tangency.
What is the value of e° ?



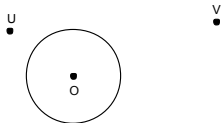
13. Draw a line through point P that is NOT a tangent to the circle.



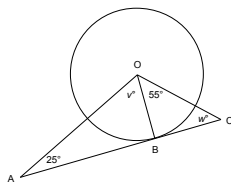
14. Draw a line through point P that is a tangent to the circle.
Label the point of tangency Q.



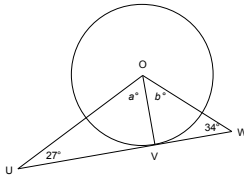
15. Is the line that passes through points U and V a tangent to the circle?



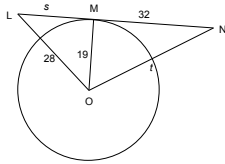
16. O is the centre of this circle and point B is a point of tangency.
Determine the values of v° and w° .



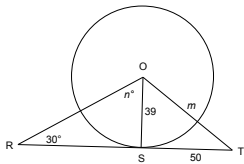
17. O is the centre of this circle and point V is a point of tangency. Determine the values of a° and b° .



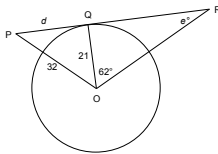
18. O is the centre of this circle and point Q is a point of tangency. Determine the values of s and t . If necessary, give your answers to the nearest tenth.



19. O is the centre of this circle and point S is a point of tangency. Determine the values of m and n° . If necessary, give your answers to the nearest tenth.

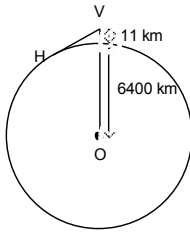


20. O is the centre of this circle and point Q is a point of tangency. Determine the values of d and e° . If necessary, give your answers to the nearest tenth.

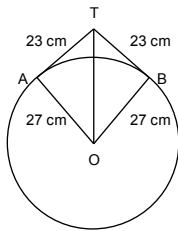


Problem

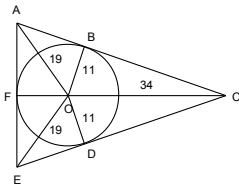
21. A Ruppell's Griffon Vulture holds the record for the bird with the highest documented flight altitude. It was spotted at a height of about 11 km above the Earth's surface. The radius of Earth is approximately 6400 km. How far was the vulture from the horizon, H? Calculate this distance to the nearest kilometre.



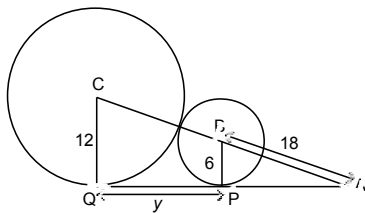
22. A circular mirror with radius 27 cm hangs from a hook. The wire is 46 cm long and is a tangent to the circle at points A and B. How far, to the nearest tenth, above the top of the mirror is the hook?



23. 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 $\triangle ACE$, to the nearest tenth.



24. 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.



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

