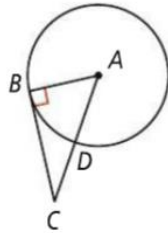




Lesson Check

Do you know HOW?

- If $m\angle A = 58$, what is $m\angle ACB$?
- If $BC = 8$ and $DC = 4$, what is the radius?
- If $AC = 12$ and $BC = 9$, what is the radius?

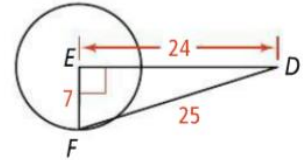


Do you UNDERSTAND?



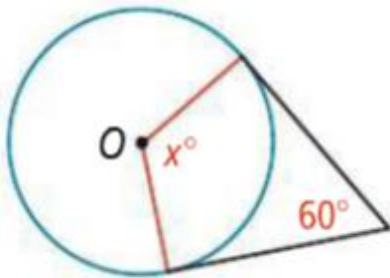
4. **Vocabulary** How are the phrases *tangent ratio* and *tangent of a circle* used differently?

5. **Error Analysis** A classmate insists that \overline{DF} is a tangent to $\odot E$. Explain how to show that your classmate is wrong.

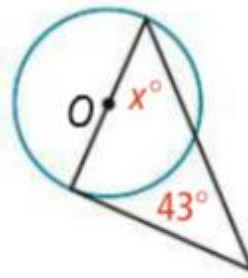


Algebra Lines that appear to be tangent are tangent. O is the center of each circle. What is the value of x ?

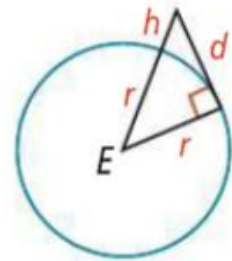
6.



7.



Earth Science The circle at the right represents Earth. The radius of Earth is about 6400 km. Find the distance d to the horizon that a person can see on a clear day from each of the following heights h above Earth. Round your answer to the nearest tenth of a kilometer.



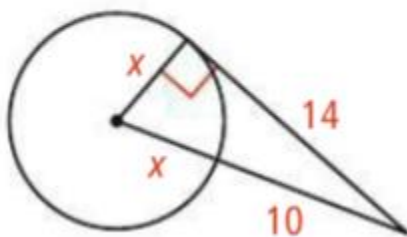
9. 5 km

10. 1 km

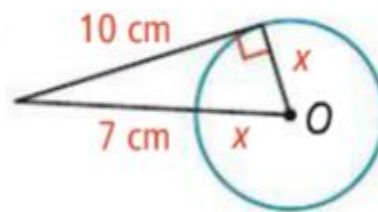
11. 2500 m

Algebra In each circle, what is the value of x , to the nearest tenth?

12.

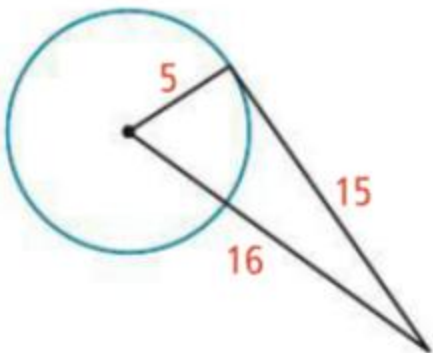


13.

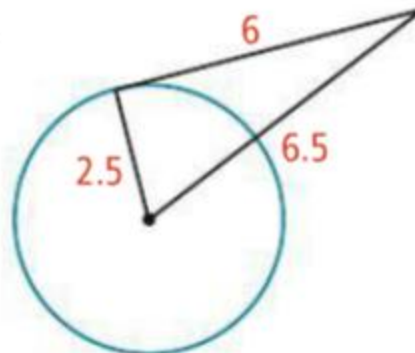


Determine whether a tangent is shown in each diagram. Explain.

15.

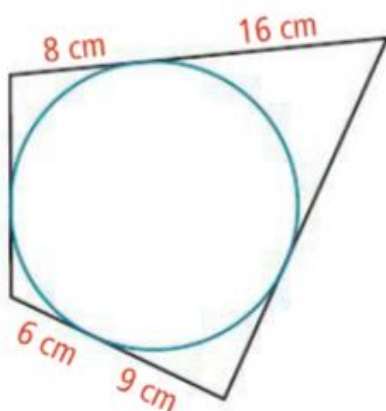


16.

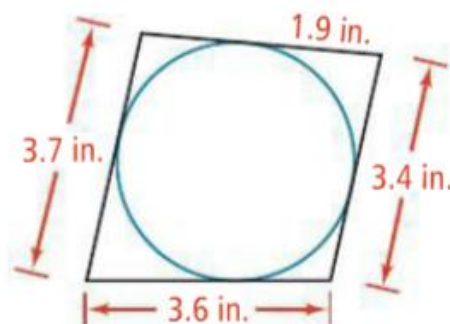


Each polygon circumscribes a circle. What is the perimeter of each polygon?

18.



19.



21. **Reasoning** A nickel, a dime, and a quarter are touching as shown. Tangents are drawn from point A to both sides of each coin. What can you conclude about the four tangent segments? Explain.

22. **Think About a Plan** Leonardo da Vinci wrote, "When each of two squares touch the same circle at four points, one is double the other." Explain why the statement is true.

- How will drawing a sketch help?
- Are both squares inside the circle?

