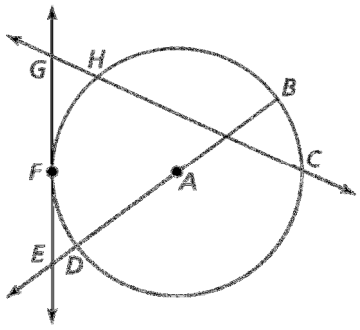
Name_____ Date_____

10.1 Practice A

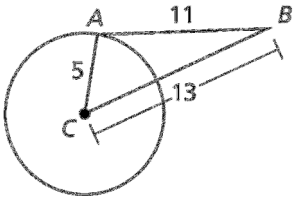
In Exercises 1–5, use the diagram.



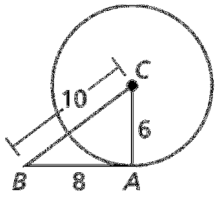
1. Name the circle.
2. Name two radii.
3. Name two chords.
4. Name a secant.
5. Name a tangent.

In Exercises 6 and 7, tell whether $\overline{AB}$ is tangent to $\odot C$. Explain your reasoning.

6.

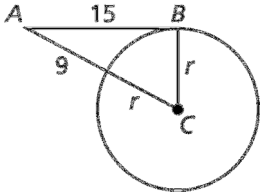


7.

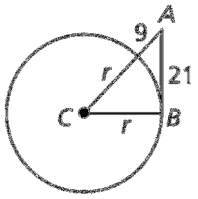


In Exercises 8 and 9, point B is a point of tangency. Find the radius r of $\odot C$.

8.



9.



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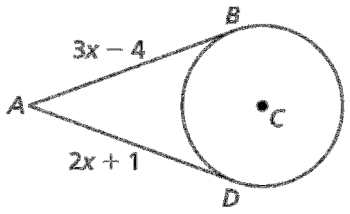
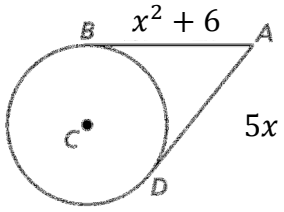
In Exercises 10 and 11, points *B* and *D* are points of tangency. Find the value(s) of *x*.

10.



11.

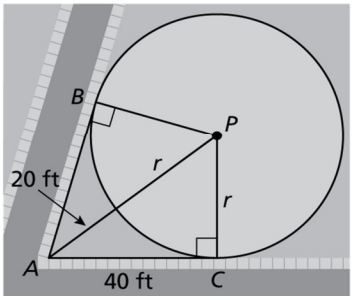


12. Construct $\odot C$ with a 1-inch radius and a point A outside of $\odot C$. Then construct a line tangent to $\odot C$ that passes through A.

13. Two sidewalks are tangent to a circular park centered at P, as shown.

a. What is the length of sidewalk $\overline{AB}$? Explain.

b. What is the diameter of the park?



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Answers

10.1 Practice A

1. $\odot A$ **2.** $\overline{AB}, \overline{AD}$ **3.** $\overline{BD}, \overline{CH}$

4. $\overleftrightarrow{CH}$ **5.** $\overleftrightarrow{EG}$

6. no; $\triangle ABC$ is not a right triangle because the side lengths do not satisfy the Pythagorean Theorem (Thm. 9.1).

7. yes; $\triangle ABC$ is a right triangle because the side lengths satisfy the Pythagorean Theorem (Thm. 9.1).

8. $r = 8$ **9.** $r = 20$

10. 5 **11.** $x = 2 \text{ or } 3$

13. a. 40 ft; By the External Tangent Congruence Theorem (Thm. 10.2), the sidewalks are the same length.

b. 60 ft

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