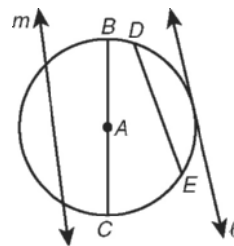


**LESSON**  
**11-1**

**Practice A**  
**Lines That Intersect Circles**

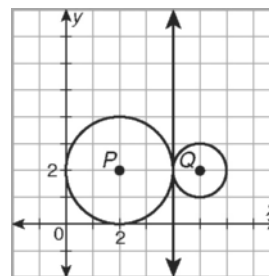
For Exercises 1–5, match the letter of the part of the figure to the names. Use each letter once.

- |                   |                    |
|-------------------|--------------------|
| 1. chord _____    | A. $\overline{AB}$ |
| 2. tangent _____  | B. $\ell$          |
| 3. radius _____   | C. $m$             |
| 4. secant _____   | D. $\overline{BC}$ |
| 5. diameter _____ | E. $\overline{DE}$ |



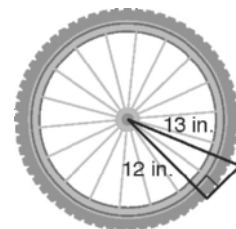
Use the figure for Exercises 6–8.

- radius of  $\odot P$  \_\_\_\_\_ radius of  $\odot Q$  \_\_\_\_\_
- coordinates of the point of tangency (\_\_\_\_\_, \_\_\_\_\_)
- equation of the tangent line at the point of tangency  
\_\_\_\_\_



Fill in the blanks to complete each theorem.

- If a line is perpendicular to a radius of a circle at a point on the circle, then the line is \_\_\_\_\_ to the circle.
- If two segments are tangent to a circle from the same external point, then the segments are \_\_\_\_\_.
- If a line is tangent to a circle, then it is \_\_\_\_\_ to the radius drawn to the point of tangency.
- Amiko is riding her bike on a wet street. As the bike wheel spins, water drops are sprayed off tangent to the wheel. Amiko's bike wheels have a radius of 12 inches. Use the Pythagorean Theorem to find the distance the water drops have been sprayed when they are 13 inches from the center of the wheel.



In Exercises 13 and 14,  $\overline{GH}$  and  $\overline{GI}$  are tangent to  $\odot J$ . Find  $GH$ .

