В

# GEOMETRY B Extra Credit Ch 10 WS.

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.





G

7.

9.

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





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



In Exercises 1–4, identify the given arc as a major arc, minor arc, or semicircle. Then find the measure of the arc.

- 1.  $\widehat{NM}$
- $2. \quad \widehat{JLM}$
- $3. \quad \widehat{NLK}$
- 4.  $\widehat{LMN}$
- 5. A recent survey asked high school girls to name the sport they like to watch the most. The results are shown in the circle graph. Find each indicated measure.
  - a.  $m\widehat{FG}$
  - **b.**  $m \widehat{EGB}$
  - c.  $m \widehat{DB}$
  - **d.**  $\widehat{mACE}$





In Exercises 6 and 7, tell whether the given arcs are congruent. Explain why or why not.

6.  $\widehat{EF}$  and  $\widehat{GH}$ 



9. Find the measure of each arc.





In Exercises 1 and 2, use the diagram of  $\odot T$ .

**1.** If  $\widehat{mPQ} = 130^\circ$ , find  $\widehat{mRQ}$ . **2.** If  $\widehat{mPR} = 100^\circ$ , find  $\widehat{mPQ}$ . P7 • T QR 7 Q

In Exercises 3–5, find the value of x.



b.

6. Determine whether  $\overline{AB}$  is a diameter of each circle. Explain your reasoning.





In Exercises 7–9, use the diagram to find the given length.

- 7. CU
- 8. UR
- **9.** the radius of  $\bigcirc C$



## In Exercises 1–3, find the indicated measure.



- 4. In the diagram shown, which statement is true? Explain.
  - **A.**  $\angle SPR \cong \angle PSQ$  **B.**  $\angle RQS \cong \angle RPS$
  - **C.**  $\angle RPS \cong \angle PRQ$  **D.**  $\angle PRQ \cong \angle SQR$

### In Exercises 5–7, find the value of each variable.









9.



#### In Exercises 1-4, write the standard equation of the circle with the given center and radius.





#### 3.

a circle with center (0, 0) and radius 8 4. a circle with center (0, -5) and radius 2

#### In Exercises 5 and 6, use the given information to write the standard equation of the circle.

- 5. The center is (0, 0), and a point on the circle is (3, -4).
- 6. The center is (3, -2), and a point on the circle is (23, 19).

In Exercises 7–9, match each graph with its equation.



**10.** The equation of a circle is  $(x + 4)^2 + (y + 2)^2 = 4$ . Find the center and radius of the circle. Then graph the circle.



In Exercises 8–9, find the center and radius of the circle. Then graph the circle.

