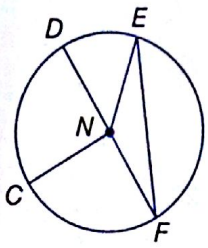
## Check Your Understanding

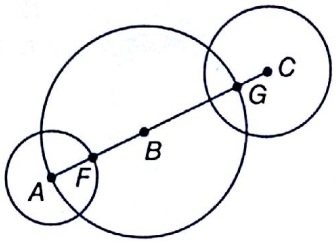
= Step-by-Step Solutions begin on page R20.

**Examples 1–2** **For Exercises 1–4, refer to ⊙N.**




1. Name the circle.
2. Identify each.
   a. a chord  b. a diameter  c. a radius
3. If $CN = 8$ centimeters, find $DN$.
4. If $EN = 13$ feet, what is the diameter of the circle?

**Example 3** **The diameters of ⊙A, ⊙B, and ⊙C are 8 inches, 18 inches, and 11 inches, respectively. Find each measure.**



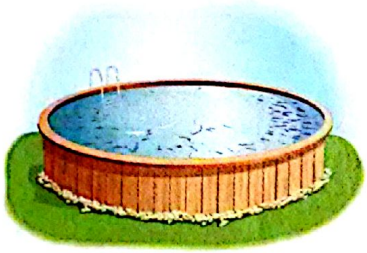

5. $FG$
6. $FB$

**Example 4**

7. **RIDES** The circular ride described at the beginning of the lesson has a diameter of 44 feet. What are the radius and circumference of the ride? Round to the nearest hundredth, if necessary.

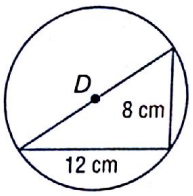
**Example 5**

8. **POOLS** The circumference of the circular swimming pool shown is about 56.5 feet. What are the diameter and radius of the pool? Round to the nearest hundredth.



**Example 6**

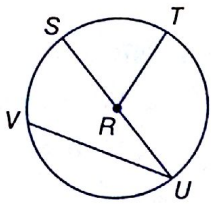
9. **SHORT RESPONSE** The right triangle shown is inscribed in ⊙D. Find the exact circumference of ⊙D.




## Practice and Problem Solving

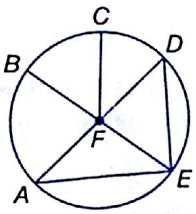
Extra Practice begins on page 969.

**Examples 1–2** **For Exercises 10–13, refer to ⊙R.**



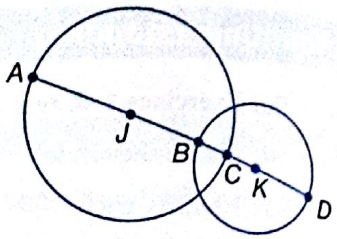

10. Name the center of the circle.
11. Identify a chord that is also a diameter.
12. Is $\overline{VU}$ a radius? Explain.
13. If $SU = 16.2$ centimeters, what is $RT$?

**For Exercises 14–17, refer to ⊙F.**




14. Identify a chord that is not a diameter.
15. If $CF = 14$ inches, what is the diameter of the circle?
16. Is $\overline{AF} \cong \overline{EF}$? Explain.
17. If $DA = 7.4$ centimeters, what is $EF$?

**Example 3** Circle $J$ has a radius of 10 units, $\odot K$ has a radius of 8 units, and $BC = 5.4$ units. Find each measure.




**18.** $CK$

**19.** $AB$

**20.** $JK$

**21.** $AD$

**Example 4**

**22. PIZZA** Find the radius and circumference of the pizza shown. Round to the nearest hundredth, if necessary.


**23. BICYCLES** A bicycle has tires with a diameter of 26 inches. Find the radius and circumference of a tire. Round to the nearest hundredth, if necessary.

**Example 5** **Find the diameter and radius of a circle with the given circumference. Round to the nearest hundredth.**

**24.** $C = 18$ in.

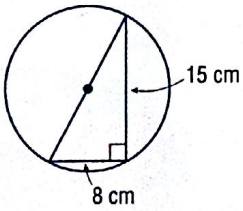
**25.** $C = 124$ ft

**26.** $C = 375.3$ cm

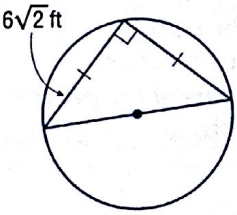
**27.** $C = 2608.25$ m

**Example 6** **Find the exact circumference of each circle by using the given inscribed or circumscribed polygon.**

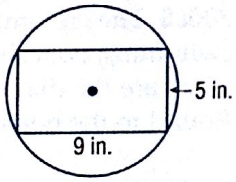
**28.**



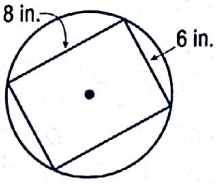

**29.**



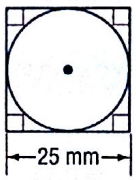

**30.**



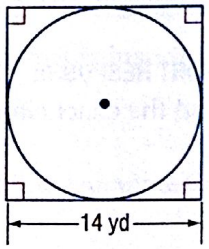

**31.**




**32.**

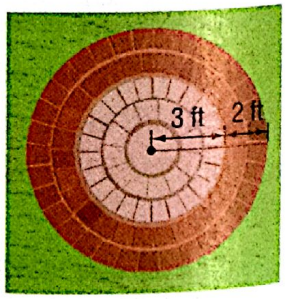



**33.**




**34. DISC GOLF** Disc golf is similar to regular golf, except that a flying disc is used instead of a ball and clubs. For professional competitions, the maximum weight of a disc in grams is 8.3 times the diameter in centimeters. What is the maximum allowable weight for a disc with circumference 66.92 centimeters? Round to the nearest tenth.

**35. PATIOS** Mr. Martinez is going to build the patio shown.




**a.** What is the patio's approximate circumference?

**b.** If Mr. Martinez changes the plans so that the inner circle has a circumference of approximately 25 feet, what should the radius of the circle be to the nearest foot?

**The radius, diameter, or circumference of a circle is given. Find each missing measure to the nearest hundredth.**

**36.** $d = 8\frac{1}{2}$ in., $r =$ ___?___, $C =$ ___?___

**37.** $r = 11\frac{2}{5}$ ft, $d =$ ___?___, $C =$ ___?___

**38.** $C = 35x$ cm, $d =$ ___?___, $r =$ ___?___

**39.** $r = \frac{x}{8}$, $d =$ ____, $C =$ ___?___