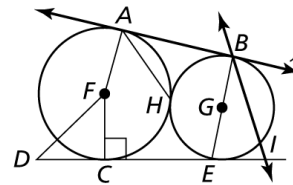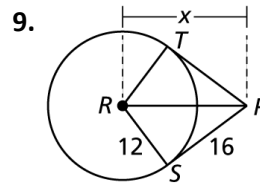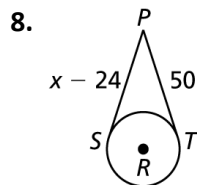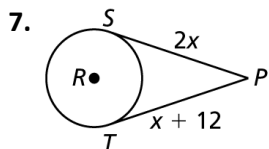**Geometry Ch 10 Review**

Use the diagram.

1. Name the diameter of Circle G.   **2.** Name a chord of Circle F.

3. Name a common tangent.

4. Name a radius of Circle F.

5. Name a point of tangency.

6. Name a secant.

Points S and T are points of tangency. Find the value of x.

7.

8.

9.

10. A belt is stretched between two pulleys, as shown. Find the approximate straight-line distance between W and X. Round your answer to the nearest tenth.
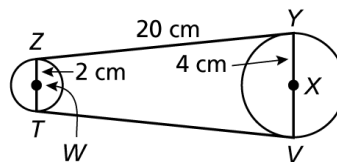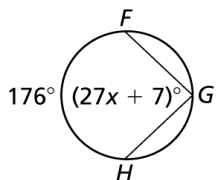
11. You are standing 25 feet from a water tower. The distance from you to the point of tangency on the tower is 45 feet. What is the radius of the water tower?
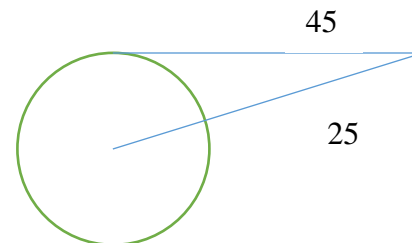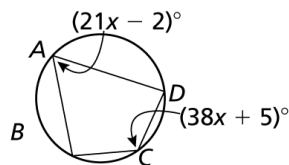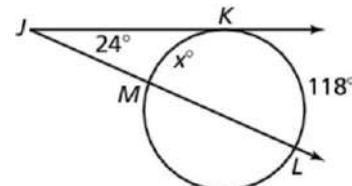
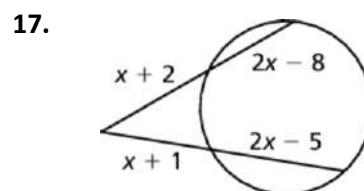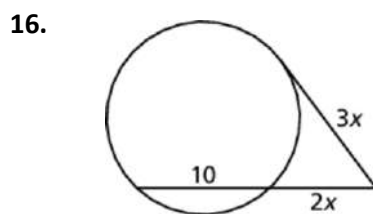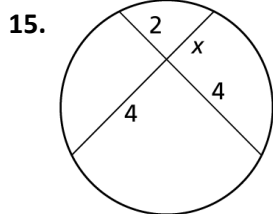**Find the indicated measure.**

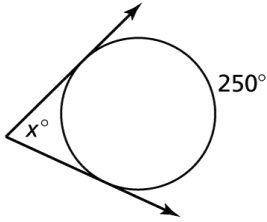12. Find the value of x.   **13.** $m\angle BCD$ **14.** Find the value of x.

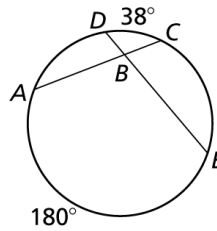**Find the value of x.**

15.   **16.**   **17.**

Find the indicated measure.

18. Find the value of *x*.

250°

x°

19. $m\angle ABE$

D 38° C

A

B

E

180°

20. If line *m* is tangent to Circle Q; find $m\widehat{RST}$.


m

S

T 100° •Q

R
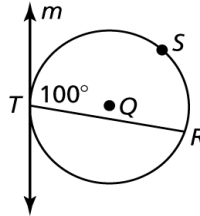
A radio tower is centered at $(6, -12)$ **on a coordinate grid where each unit represents 1 mile. The radio signal's range is 80 miles.**

21. Write the standard equation that describes the position and range of the tower.

22. If you are located at the point $(6, 75),$ would you receive the radio signal?

23. If you are located at the origin, would you receive the radio signal?

Use the given information to write the standard equation of the circle.

24. a circle with center $(-5, 4)$ and radius 2

25. a circle with center $(10, -2)$ and radius 6

26. The ends of the diameter fall at $(18, -13)$ and $(4, -3)$.

27. Write the standard equation of a circle that is tangent to the *y*-axis, with the center located at $(-4, 6)$.

28. Write the standard equation of a circle with the center at $(6, 8)$ that passes through the point $(-1, 4)$.

29. Find x.

D

E

$(17x + 6)°$

$(7x - 2)°$

B 39°

F

G

30. Find radius of Circle Q.

E 15 F

$4x + 1$

Q•

$x + 8$

H G

15
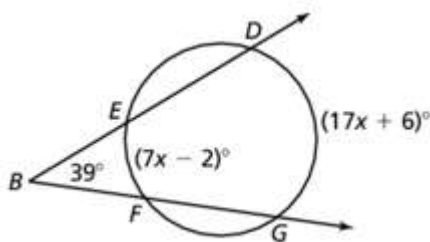
31. In the diagram shown, which statement is true? Explain.

A. $\angle SPR \cong \angle PSQ$ **B.** $\angle RQS \cong \angle RPS$

C. $\angle RPS \cong \angle PRQ$ **D.** $\angle PRQ \cong \angle SQR$

P Q

S R
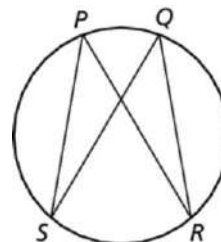
Answers:

1. $\overline{BE}$ **2.** $\overline{AH}$ **3.** line l   **4.** *Sample answer:* $\overline{FC}$ **5.** *Sample answer:* Point *A*

6. $\overline{BI}$ **7.** 12   **8.** 74   **9.** 20   **10.** 19.9 cm   **11.** 28 ft

12. 3   **13.** 119°   **14.** 70   **15.** 2

16. 4   **17.** 8   **18.** 70   **19.** 109°   **20.** 200°

21. $(x - 6)^2 + (y + 12)^2 = 6400$ **22.** no   **23.** Yes   **24.** $(x + 5)^2 + (y - 4)^2 = 4$

25. $(x - 10)^2 + (y + 2)^2 = 36$ **26.** $(x - 11)^2 + (y + 8)^2 = 74$

27. $(x + 4)^2 + (y - 6)^2 = 16$ **28.** $(x - 6)^2 + (y - 8)^2 = 65$

29. 7   30. $\approx 12.8\ un$ 31. B