Geometry Unit 6 Practice Test

1. Use the diagram to find \( m\angle DAF \) in circle A.

   \[ m\angle DAF = \] 

2. Use the diagram to find \( m\angle QRT \).

   \[ x = \] 

   \[ m\angle QRT = \] 

3. If \( m\angle BDC = 40 \), \( \text{arc } AB = 140 \), and \( \text{arc } CD = 110 \), find \( m\angle 1 \).

   \[ m\angle 1 = \] 

4. If \( m\angle 1 = 3x + 2 \), \( m\angle 2 = 5x \), find \( m\angle 1 \) for circle D.

   \[ m\angle 1 = \] 

5. 

   \[ x = \]
6. \[21^\circ \times x^\circ = \ldots\]

7. \[55^\circ \times x^\circ = \ldots\]

8. \[6^\circ \times x^\circ = \ldots\]

9. \[x = \ldots\]

10. \[x = \ldots\]

11. \[x = \ldots\]

12. \[x = \ldots\]
13. In circle $O$, $m\angle R = 23$. Find $m\angle O$. (The figure is not drawn to scale.)

$\angle O = \underline{\hspace{2cm}}$

14. Assume that lines that appear to be tangent are tangent. $O$ is the center of the circle. Find the value of $x$, given: $m\angle O = 135$. (Figures are not drawn to scale.)

$x = \underline{\hspace{2cm}}$

15. In $\odot D$, $AB \cong CB$ and $m\ arc\ CE = 50$. Find $m\angle BCE$

$m\angle BCE = \underline{\hspace{2cm}}$

16. Find the value of the radius $x$. The figure is not drawn to scale.

$x = \underline{\hspace{2cm}}$

17. $\overline{WZ}$ and $\overline{XR}$ are diameters. Find the measure of arc $ZWX$.

18. The radius of circle $O$ is 17, and $OC = 8$. Find $AB$. 
19. Find $m\angle BAC$ in $\odot O$.

20. Write the standard equation for the circle with center $(2, 7), r = 4$.

21. Find the center and radius of the circle with equation $(x + 9)^2 + (y + 5)^2 = 64$.

**Review Problems**

22. Find the length of the missing side.

23. Solve for $x$ and $y$.

24. Solve for $x$. Round to the nearest tenth.

25. Use the diagram below.

26. Find the area of the smaller sector if the circumference is $20\pi$.