**Radius:** The length from the center of a circle to its perimeter (r).

**Diameter:** The length from one end of the circle to the other (d).

**Circumference:** The distance around a circle. **Formula:** $C=\pi d$ or $C=2\pi r$

**Area:** The number of square units inside a circle. **Formula:** $A=\pi r^2$
**Tips:**
- If you are given the radius, you can double it to determine the diameter. So, if the radius is 7 inches, the diameter is 14 inches.
- If you are given the diameter, you can halve it to determine the radius. So, if the diameter is 22 feet, the radius is 11 feet.

**Practice Problems:**

1. **What is the circumference of this circle?**
   - **Problem:** $r = 5 \text{ cm.}$
   - **Solution:**
     1. Plug the radius ($r$) into the circumference formula: $C = 2\pi r = 2\pi(5)$
     2. Combine like terms: $C = 10\pi$
     3. You can either leave your answer as $10\pi \text{ cm}$, or you can change it to $31.4 \text{ cm}$.

2. **What is the area of this circle?**
   - **Problem:** $d = 9.5 \text{ ft.}$
   - **Solution:**
     1. Determine the radius: $9.5/2 = 4.75 \text{ ft.}$
     2. Plug the radius into the area formula: $A = \pi r^2 = \pi(4.75)^2$
     3. Simplify: $A = 22.56\pi$
     4. You can either leave your answer as $22.56\pi \text{ ft.}$, or you can change it to $70.84 \text{ ft.}$

3. **What is the diameter of this circle?**
   - **Problem:** $A = 25\pi \text{ ft}^2$
   - **Solution:**
     1. Plug the area into the formula: $25\pi = \pi r^2$
     2. Cancel out the $\pi$ on both sides of the equal sign: $25 = r^2$
     3. Take the square root of both sides: $5 = r$
     4. Double this number in order to find the diameter: $d = 10 \text{ feet}$.

4. **What is the radius of this circle?**
   - **Problem:** $C = 34\pi \text{ in.}$
   - **Solution:**
     1. Plug the circumference into the formula: $34\pi = 2\pi r$
     2. Cancel out the $\pi$ on both sides of the equal sign: $34 = 2r$
     3. Divide both sides by two to get your final answer: $r = 17 \text{ inches}$.