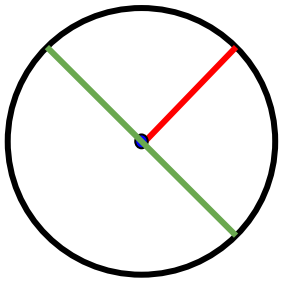
How to Find the Area of a Circle

A **circle** is made of a few parts.



- Every circle has a **center** point.
- From the center point to the circle's *edge* is called the **radius**.
- From circle's edge to circle's edge through the center point of the circle is called the **diameter**.
- Notice that the radius is half the distance of the diameter! Check the example below.

(*The red segment represents the radius; the green segment represents the diameter; the blue point in the middle is the center of the circle.)*

The formula for the area of a circle is:

$$A = \pi r^2$$

A = area of a circle
π = pi ≈3.14 (pi is the ratio of the circumference of a circle to the diameter of a circle)
r = radius of the circle

Step 1: Determine if you are given the radius or the diameter of the circle.
Step 1a: If given the diameter, **divide** it by 2 so that you have the radius, then move to step 2.
Step 1b: If given the radius, move to step 2.
Step 2: Plug in the value for the radius into the formula.
Step 3: Per the Order of Operations, **square** the radius.
Step 4: Then, **multiply** the values.
Step 5: Include the squared measurement in your answer.

Example questions:

Given the radius of a circle is 2.5 meters, what is the area of the circle? 1. Given that $r = 2.5$ 2. $A = \pi (2.5)^2$ 3. $A = \pi (6.25)$ 4. $A = (3.14)(6.25)$ 5. $A = 19.625$ meters^2	*Given the diameter of a circle is 7 inches, what is the area of the circle?* 1. Given that $d = 7$ a. My radius is 3.5. 2. $A = \pi (3.5)^2$ 3. $A = \pi (12.25)$ 4. $A = (3.14)(12.25)$ 5. $A = 38.465$ inches^2