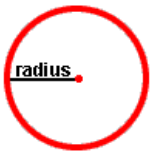
Area and Circumference Notes

The **radius** of a circle is the distance from the center of a circle to any point on the circle. The radius is half of the diameter.



The distance across a circle through the center is called the **diameter**.

Circumference of a circle is simply the distance around the circle. The circumference is similar to perimeter of a shape such as a rectangle.

Circumference formula: $C=2\pi r$ or πd

In this formula C stands for circumference, 2 is just the number 2, π is for purposes of this class equal to 3.14, and r is the *radius* of the circle.

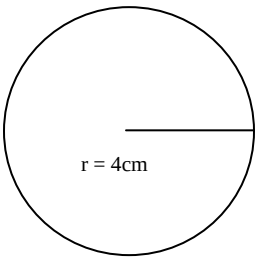
The **area** of a circle is the number of square units inside that circle.

Area Formula: $A=\pi r^2$

A is area, π is again "pi" or 3.14, r is radius and it is squared. Be careful to follow order of operations when using this formula. The formula doesn't work if we multiply pi times r first and then square that number. The squared sign applies ONLY to the radius.

π or "pi"= 3.14 for all purposes during this class.

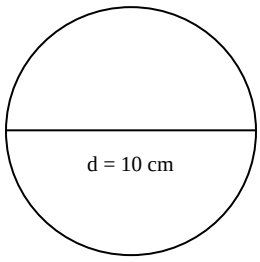
Example 1:



$C=2\pi 4$
$C=2(3.14)(4)$
C=25.12cm

$A=\pi 4^2$
$A=3.14(16)$
A=50.24 cm^2

Example 2:



$C=\pi 10$
$C=(3.14)(10)$
C=31.4cm

$A=\pi 5^2$
$A=3.14(25)$
A=78.5 cm^2