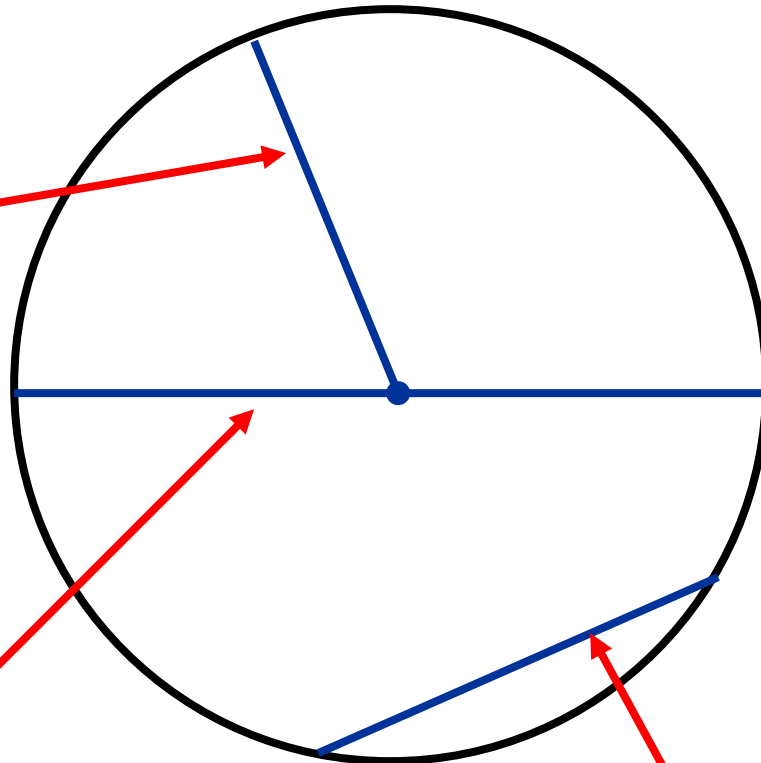# Area: Circles

6th Grade Mathematics

Mr. Wong

Circle - **is the set of all points that are the same distance from the center.**

Radius - is a line segment from the center of a circle to the outside of the circle

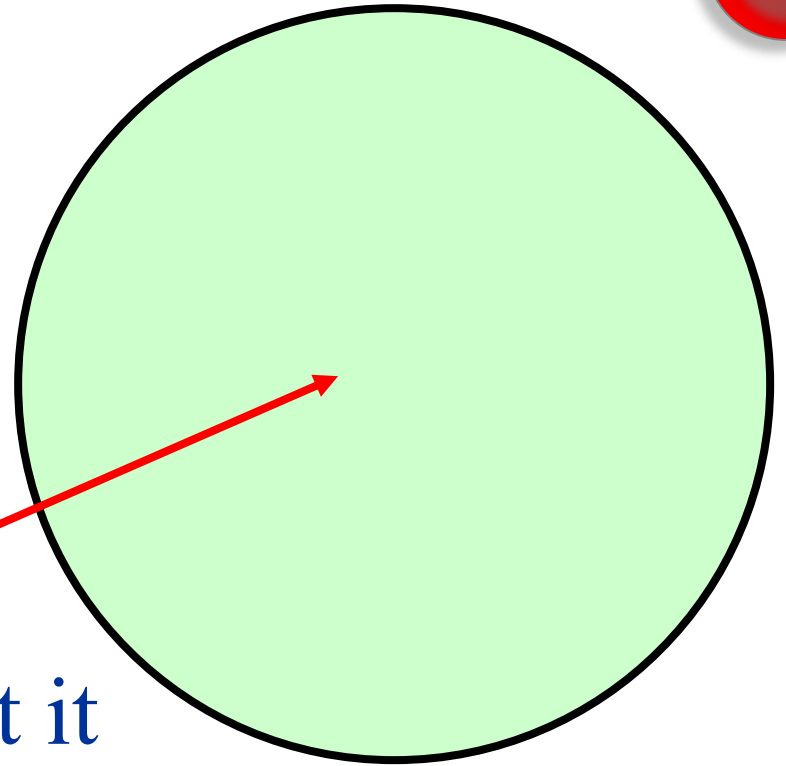Diameter - is a chord that goes through the center of a circle

Chord - is a line segment whose endpoints are on the circle

Area of a Circle

$$A = \pi \cdot (d/2)^2$$

$$A = \pi \cdot r^2$$

Area is the amount it takes to cover a circle.

Ex. 1 Find the area.

Radius = 5 m

$\pi = 3.14$
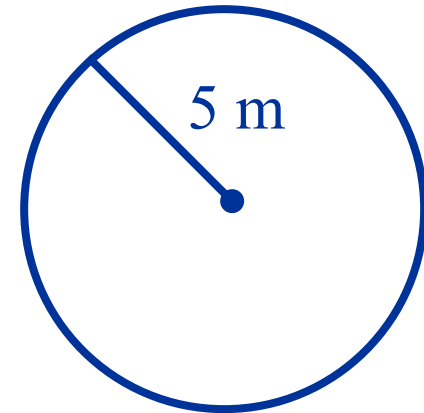
$A = \pi \cdot r^2$

$A = 3.14 \cdot 5^2$

$A = 3.14 \cdot 25$

$A = 78.5 \text{ m}^2$

5 m

Ex. 2 Find the Area.

Diameter = 8 in

$A = \pi \cdot (d/2)^2$

$A = 3.14 \cdot (8/2)^2$

$A = 3.14 \cdot (4)^2$

$A = 3.14 \cdot 16$

$A = 50.24$ in^2

$\pi = 3.14$

8 in

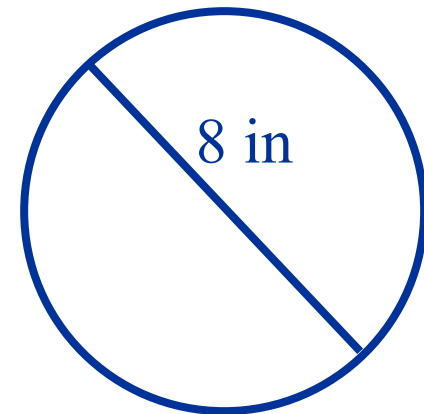# Ex. 3 Find the Area.
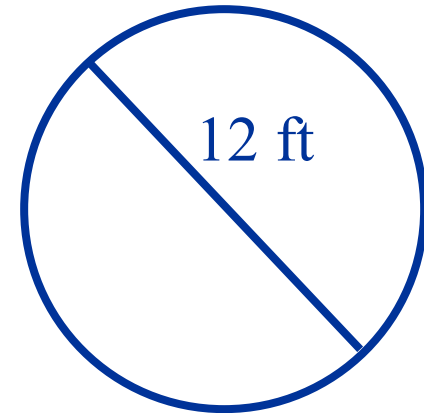
Diameter = 12 ft

$\pi = 3.14$

$A = \pi \cdot (d/2)^2$

$A = 3.14 \cdot (12/2)^2$

$A = 3.14 \cdot (6)^2$

$A = 3.14 \cdot 36$

$A = 113.04 \text{ ft}^2$

12 ft

Ex. 4 Find the Area. $\pi = 3.14$

Find the area of the rectangle and
the area of half a circle.

10 ft   5 ft

Area of Circle   **Area of Rectangle**

$A = \pi \cdot (d/2)^2$ $A = l \cdot w$

$A = 3.14 \cdot (5/2)^2$ $A = 10 \cdot 5$

$A = 3.14 \cdot (2.5)^2$ $A = 50 \ ft^2$

$A = 3.14 \cdot 6.25$

$A = 19.625 \ ft^2$ Total area $= 50 + 9.8125 =$
59.8125 ft²

Half of a circle $= 19.625/2$
$= 9.8125 \ ft^2$