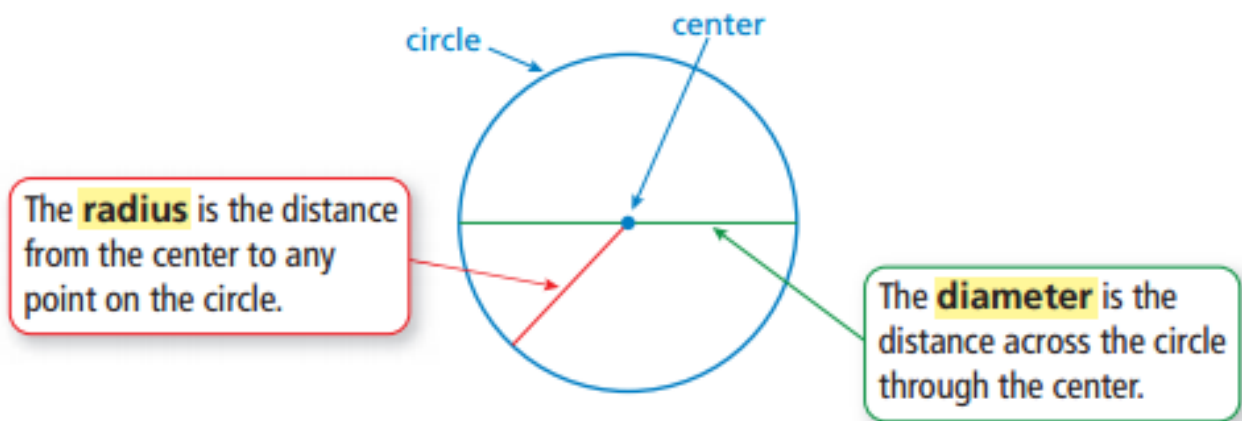# Circles

**Circle**: the set of all points in a plane that are the same distance from a point called the <u>center</u>.

**Radius***:* the distance from the center to any point on the circle.

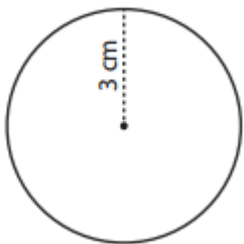**Diameter:** the distance across the circle through the center.

center

circle

The **radius** is the distance from the center to any point on the circle.

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

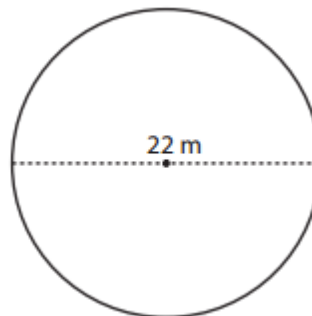**Area of Circle:** the space that is taken up inside a figure.

$$A = \pi r^2$$

$$Area = \pi \times radius^2$$

Example 1:

3 cm

$A = \pi r^2$
$A = (3.14)(3)^2$
$A = (3.14)(9)$
$A = 28.26 cm^2$

Example 2:

22 m

$A = \pi r^2$
$A = (3.14)(11)^2$
$A = (3.14)(121)$
$A = 379.94 \ m^2$

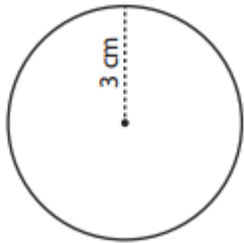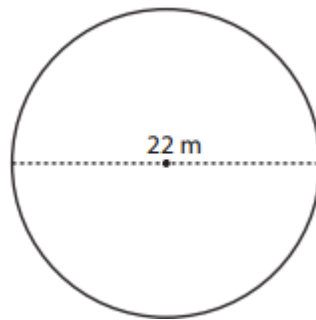# <u>Circumference of Circle:</u> the distance around a circle.

$$C = \pi d$$

**or**

$$C = 2\pi r$$

Example 1:

$C = \pi d$
$C = (3.14)(6)$
$C = 18.84\ cm$

Example 2:

$C = \pi d$
$C = (3.14)(22)$
$C = 69.08\ m$

3 cm

22 m