11.1A Notes Intro to Circles

DEFINITION: A **CIRCLE** is the set of all points that are_____ from a fixed point, called the CENTER.

The **DISTANCE** between the **CENTER** and any **POINT** on the circle is called the _____.

STANDARD FORM OF A CIRCLE: $(x-h)^2+(y-k)^2=r^2$ Where **(h, k)** is the _____ and **r** is the _____.

Example 1:

a) Write the equation of a circle with a center (7, -3) and a radius of 6.

b) Write the equation of a circle centered at the origin with radius of 11.

Example 2: Identify the center and radius of each circle.

a) $(x-3)^2+y^2=\frac{25}{49}$

center (,)

radius = _____

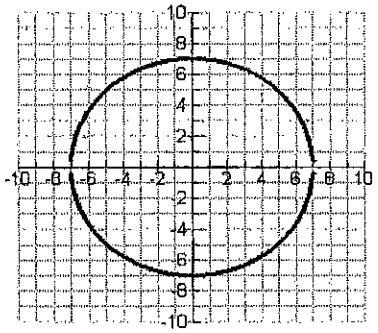
b) $(x-.5)^2+(y-.6)^2=81$

center (,)

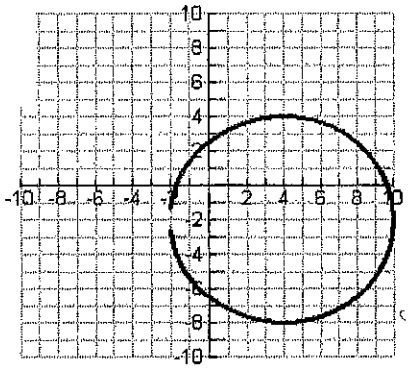
radius = _____

Example 3: Given the graph, write the equation of the circle

a)



b)



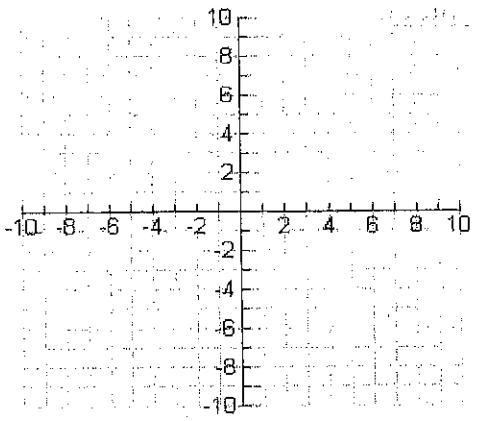
Example 4: Graph the circle.

a) $(x-3)^2 + (y+4)^2 = 4$

Radius = _____
Center = (,)

b) $(x+5)^2 + y^2 = 4.5$

Radius_____
Center = (,)



Example 5: Write the equation for a circle with center at the origin & a point on the circle (1, 4).

Sketch a picture: **What do we need to find ?**_____

Example 6: Write the equation for a circle with center (-2, 3) and a point on the circle (1, -1).