Geometry

10.7 Write and Graph Equations of Circles

## Standard equation of a circle

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

radius

center

(h, k) is the \_\_\_\_\_\_\_\_\_\_ of the circle and r is the \_\_\_\_\_\_\_\_\_\_

Identify the center and radius of the given circles

(x – 3)2 + (y + 2)2 = 16

center at (3, -2) and r = 4

x2 + (y + 3)2 = 4

center at (0, -3) and r = 2

## Graph Circles

center

To graph, plot the \_\_\_\_\_\_\_\_\_\_\_ point.

radius

right

left

down

up

Then go \_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_ from the center the distance of the \_\_\_\_\_\_\_\_\_.

center

four

You now have \_\_\_\_\_\_\_\_ points around the \_\_\_\_\_\_\_\_\_.

circle

Connect the points with a \_\_\_\_\_\_\_\_.

Write an equation for a circle with center (2, -4) and

Graph (x – 4)2 + (y + 2)2 = 36 and the line y = 2x – 2 and state whether the line is a tangent or secant.



Graph the circle 🡪 center at (4, -2) r = 6

Graph the line (use either slope intercept or table of values)

It is a secant line

Assignment: 702 #2-38 even, 42, 46-54 even = 25

Extra Credit: 705 #2, 4 = +2