Name: _____     Date: _____     Period ; _____

# Circles Worksheet Day #1

Write an equation of a circle given the following information.

|     | Center    | Radius      | Equation |
| --- | --------- | ----------- | -------- |
| 1.  | (2, -4)   | 4           | _____ |
| 2.  | (-7, 1)   | 15          | _____ |
| 3.  | (3, 0)    | 1/3         | _____ |
| 4.  | (-5, -3)  | $3\sqrt{2}$ | _____ |

Write an equation of each circle described below.  Show work!

5.      Given a circle with center (3, -4) and passing through (6, 2).

6.      Given a circle with the center (5, 1) and a point on the circle (8, -2).

7.      Given a circle with the center at the origin and passing through (4, 3).

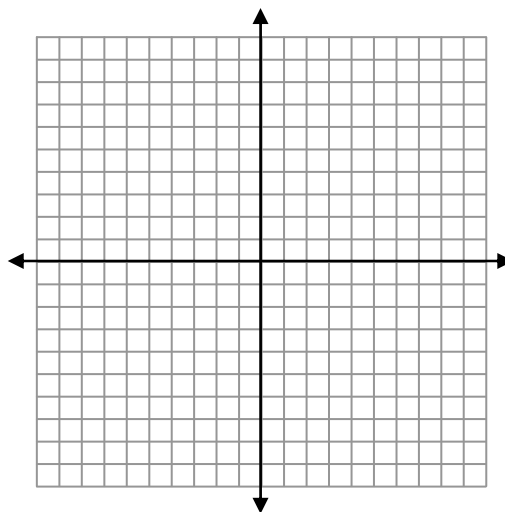Extension *(Hint:  find the coordinates of the center first)*

8.      Given a circle with (5, 1) and (3, -1) as the endpoints of the diameter.

9.      Given a circle with (2, 1) and (6, -3) as the endpoints of the diameter.

10.     Given a circle with (4, -3) and (2, 1) as the endpoints of the diameter.

**Part 2: Graphing Circles**
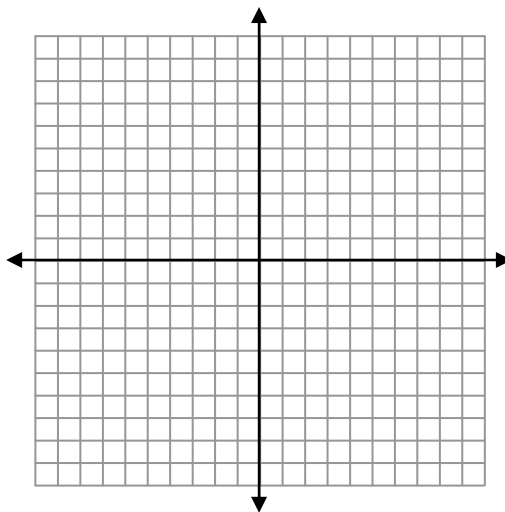
1.  $(x)^2 + (y)^2 = 36$

    C = (    ,    )

    r = _____

2.  $(x-3)^2 + (y-4)^2 = 25$

    C = (    ,    )

    r = _____

3.  $(x-5)^2 + (y+4)^2 = 41$

    C = (    ,    )

    r = _____