

Name: Key

Date: _____

Period: _____

Circles Worksheet Day #1

Write an equation of a circle given the following information.

	Center	Radius	Equation
1.	(2, -4)	4	$(x-2)^2 + (y+4)^2 = 16$
2.	(-7, 1)	15	$(x+7)^2 + (y-1)^2 = 225$
3.	(3, 0)	1/3	$(x-3)^2 + y^2 = 1/9$
4.	(-5, -3)	$3\sqrt{2}$	$(x+5)^2 + (y+3)^2 = 18$

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

(use distance formula)

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

$$(x-3)^2 + (y+4)^2 = 45$$

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

$$(x-5)^2 + (y-1)^2 = 18$$

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

$$x^2 + y^2 = 25$$



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

Looking for circle equation

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

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

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

$$(x-4)^2 + (y+1)^2 = 8$$

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

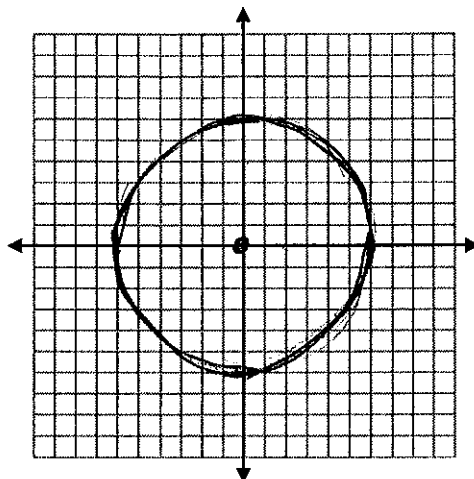
$$(x-3)^2 + (y+1)^2 = 5$$

Part 2: Graphing Circles

1. $(x)^2 + (y)^2 = 36$

$c = (0, 0)$

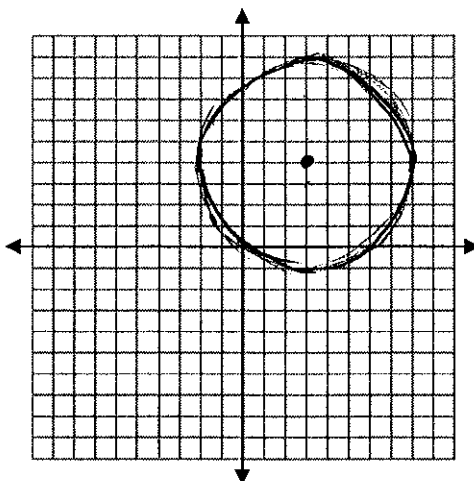
$r = \underline{6}$



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

$c = (3, 4)$

$r = \underline{5}$



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

$c = (5, -4)$

$r = \underline{\sqrt{41}} \approx 6.4$

