

Equation of a Circle applications

Name: Key

1- Write the equation for the circle with center (2, 3) and $r = 5$

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

2- Write the equation for the circle with center (-4, -6) and $r = 7$

$$(x+4)^2 + (y+6)^2 = 49$$

3- Write the equation for the circle with center (3, -3) and $r = 2$

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

For each given circle equation, find the center and the radius of the circle.

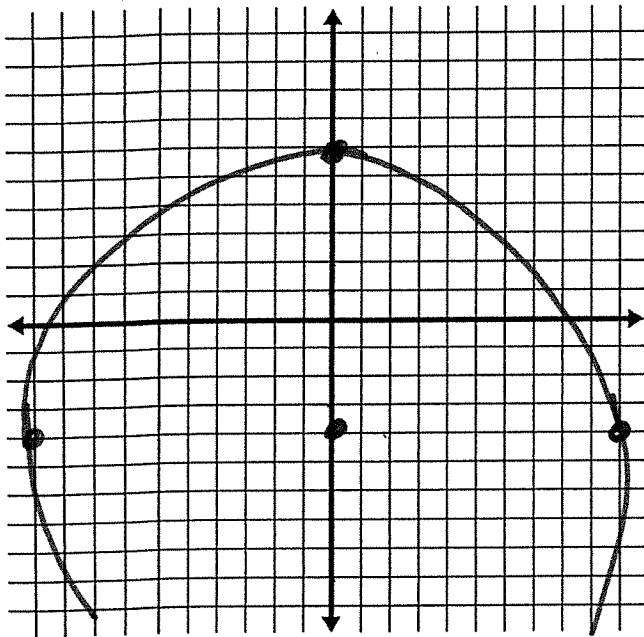
1- $(x+5)^2 + (y+2)^2 = 49$ center = $(-5, -2)$ radius = 7

2- $(x-7)^2 + (y+2)^2 = 36$ center = $(7, -2)$ radius = 6

3- $(x-5)^2 + (y-4)^2 = 100$ center = $(5, 4)$ radius = 10

From the given equation, find Radius, Center, and Graph

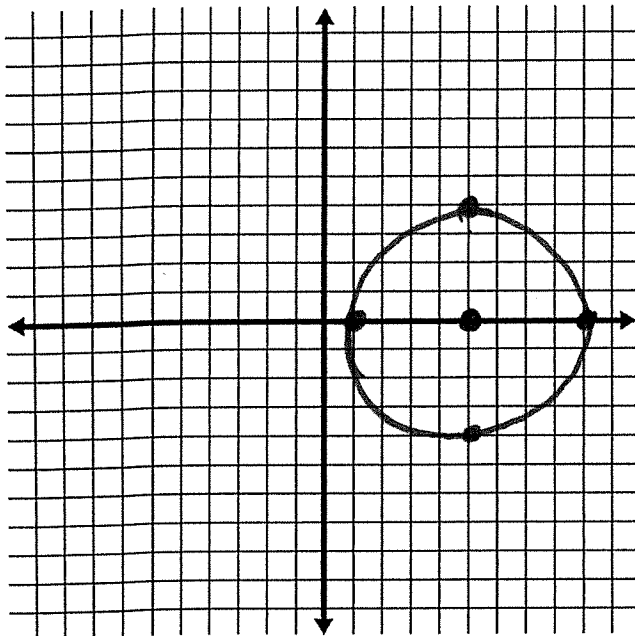
1- $X^2 + (Y+4)^2 = 100$



Center = $(0, -4)$

Radius = 10

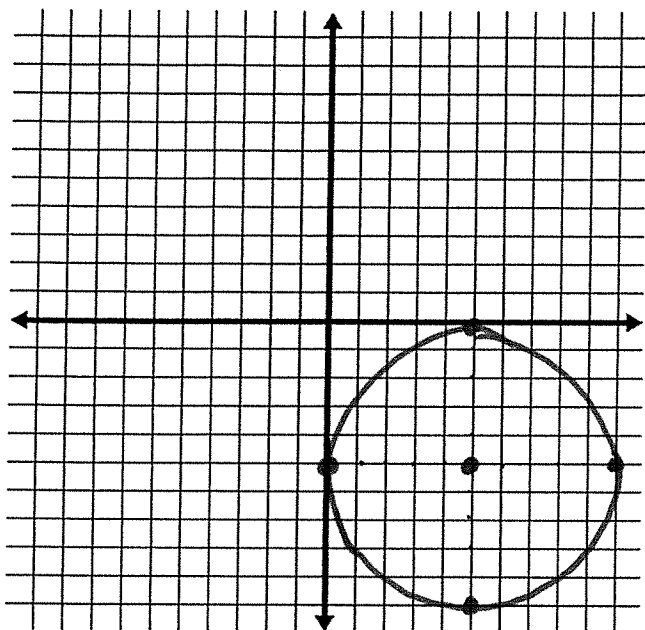
2- $(x-5)^2 + y^2 = 16$



Center = $(5, 0)$

Radius = 4

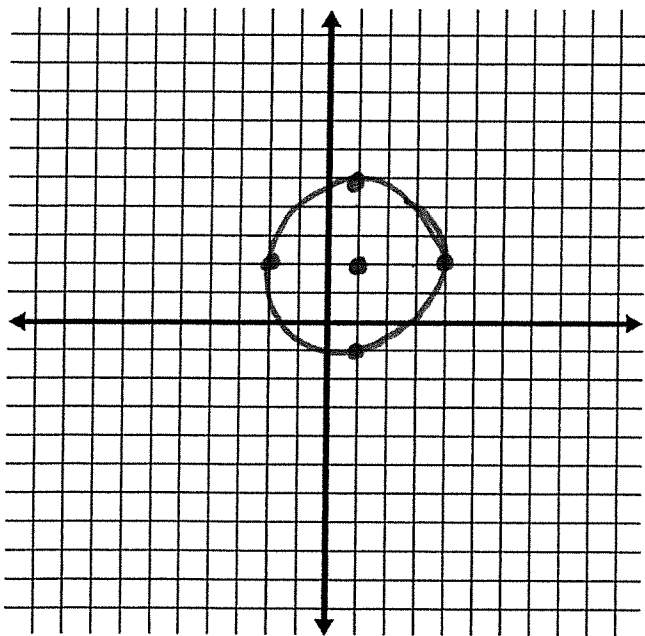
$$3- (x-5)^2 + (x+5)^2 = 25$$



$$\text{Center} = (5, -5)$$

$$\text{Radius} = 5$$

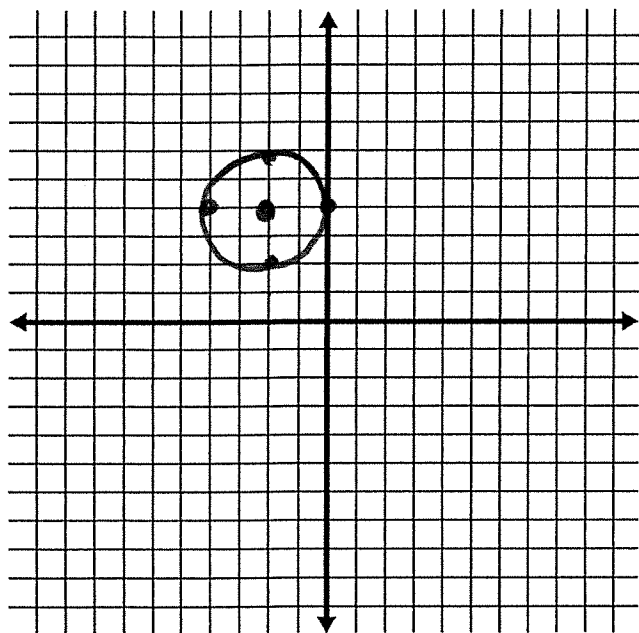
$$4- (x-1)^2 + (y-2)^2 = 9$$



$$\text{Center} = (1, 2)$$

$$\text{Radius} = 3$$

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



Center = $(-2, 4)$

Radius = 2