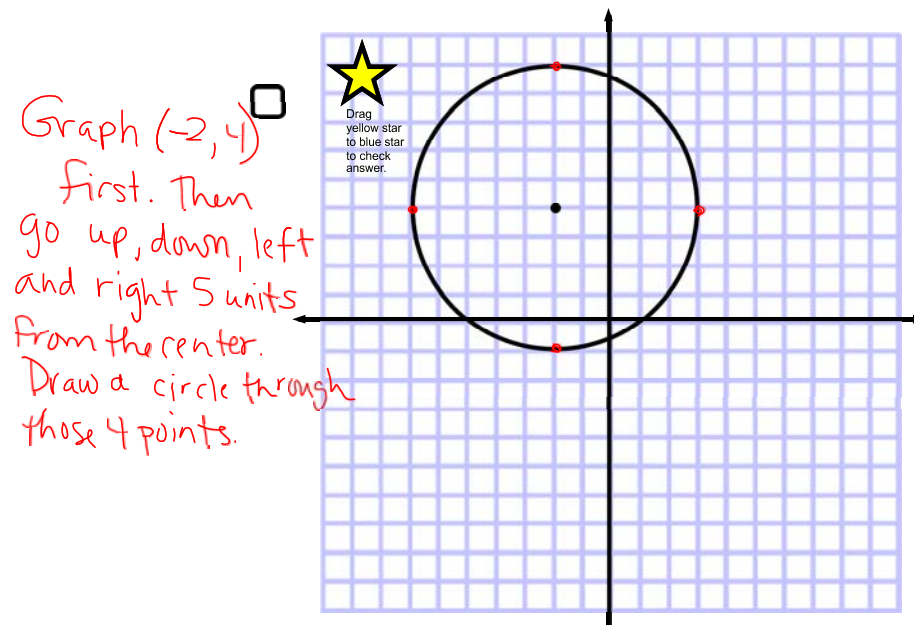


1.

What is the equation in of the circle that has a center at  $(-2, 4)$  and a diameter of 10? *radius = 5*

What does the graph look like?



2. What is the equation of the circle that has a radius of 3 and a center at  $(0, -2)$ ?

$$(x-h)^2 + (y-k)^2 = r^2 \quad \text{where } (h, k) = \text{center} \\ \text{and } r = \text{radius}$$

$$(x-0)^2 + (y-(-2))^2 = 3^2$$

$$\boxed{x^2 + (y+2)^2 = 9}$$

3. Graph the circle that has the equation  $(x - 1)^2 + (y + 4)^2 = 16$ .

←  $(x - h)^2 + (y - k)^2 = r^2$

Step 1:

Identify h and k.

$h = \underline{1}$      $k = \underline{-4}$

The center of the circle is  $(\underline{1}, \underline{-4})$ .

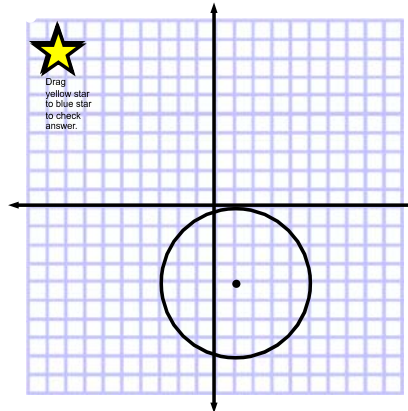
Step 2: Identify the radius.

$r^2 = \underline{16}$

$r = \underline{4}$

Step 3: Graph the circle.

Erase to reveal the answers.



4. Graph the circle that has the equation  $(x + 2)^2 + y^2 = 25$ .

$h = \underline{-2}$      $k = \underline{0}$

Center:  $\underline{(-2, 0)}$

$r^2 = \underline{25}$

radius =  $\underline{5}$

Erase to reveal answers.

