

10.3 Review - Warm - up

1. What is an equation of a circle with center $(4, -6)$ and radius 5?

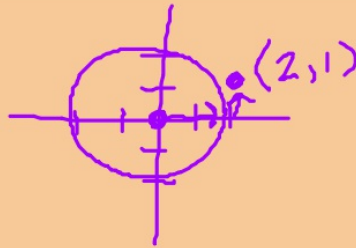
$$(x-h)^2 + (y-k)^2 = r^2$$

$$(x-4)^2 + (y+6)^2 = 5^2$$

$$(x-4)^2 + (y+6)^2 = 25$$

2. What is an equation for the translation of $x^2 + y^2 = 4.2$ by 2 units right and 1 unit up?

$$(x-a)^2 + (y-b)^2 = 4.2$$



$$(x-2)^2 + (y-1)^2 = 4.2$$

$$h=2$$

$$k=1$$

3. You have a tree in your yard 5 ft to the right of and 7 ft in front of the corner of your porch. A circular fence 2 ft in radius has its center at the tree. If the corner of your porch is the origin and forward is the positive y direction, what equation represents the circle formed by the fence in your yard?

$$(x-5)^2 + (y-7)^2 = 2^2$$

$$(x-5)^2 + (y-7)^2 = 4$$