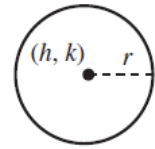


An equation for a circle with center at (h,k) and a radius of r units is



Write an equation for each circle:

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

1. center at $(0,0)$, $r = 8$

4. center at $(3,-1)$, $r = 16$

2. center at $(0,-4)$, $r = 4$

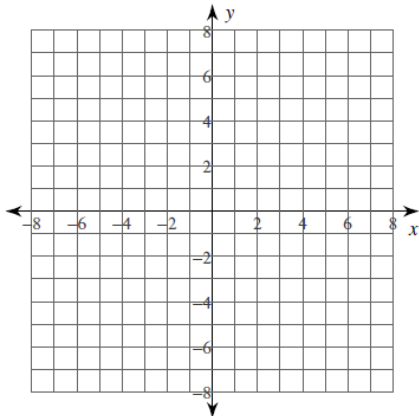
5. center at $(2,-3)$, $r = \sqrt{3}$

3. center at $(-2,-6)$, $r = 1$

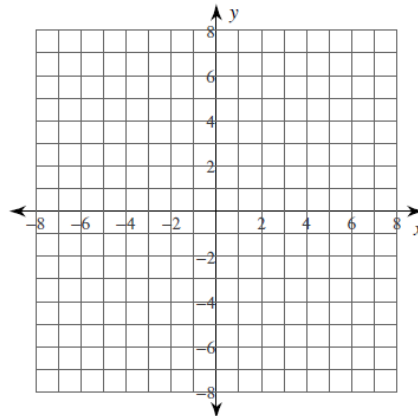
6. center at origin , $d = 6$

Identify the center and radius of each, then graph.

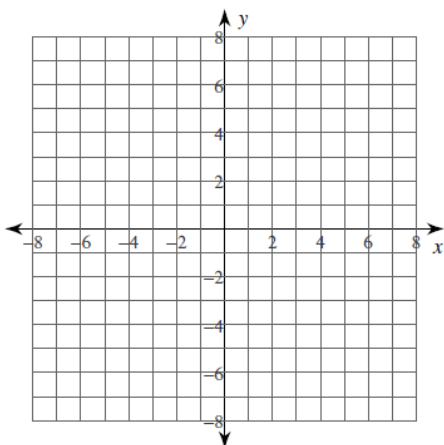
7) $(x - 1)^2 + (y + 3)^2 = 4$



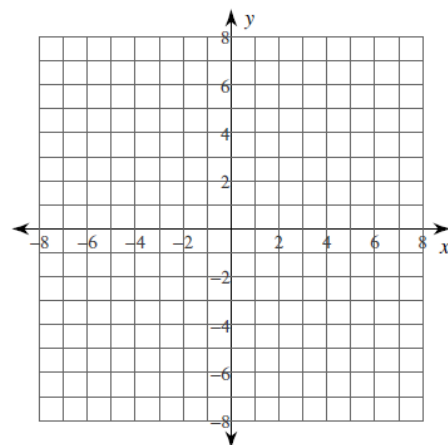
8) $(x - 2)^2 + (y + 1)^2 = 16$



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



10) $x^2 + (y - 3)^2 = 14$



11. Find the center and radius of a circle with equation $x^2 + (y - 2)^2 = 25$

12. Find the center and radius of a circle with equation $(x + 4)^2 + (y + 1)^2 = 4$

13. The endpoints of a diameter of a circle are (11,13) and (8,17). Write the equation of the circle.

14. A circle is centered at (-2,3) and contains point (5,9). Write the equation for the circle.

15. The endpoints of a diameter of a circle are (5,-7) and (-2,4). Write the equation of the circle.

16. A circle is centered at (0,1/2) with radius 8. Write the equation for the circle.

17. A circle is centered at (10,-14) and Tangent to line $x = 13$. Write the equation for the circle.

18. A circle is centered at (0,13) and contains Area = 25π . Write the equation for the circle.