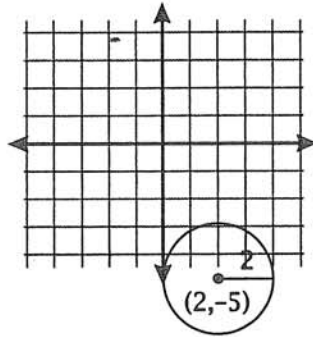


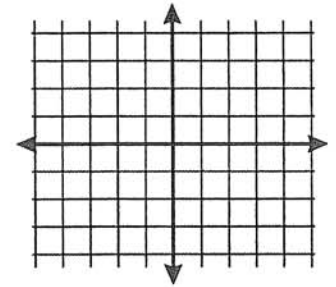
10.7 – Equation of a Circle

Graph each circle and label its center and radius.

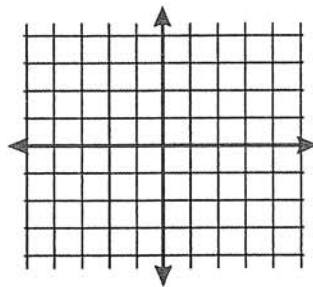
Example: $(x - 2)^2 + (y + 5)^2 = 4$
 center $(2, -5)$
 radius = 2



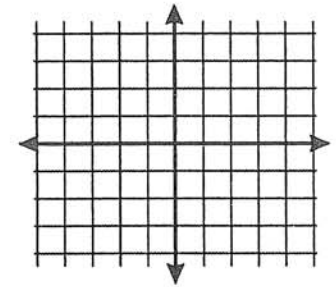
1. $x^2 + (y - 3)^2 = 16$



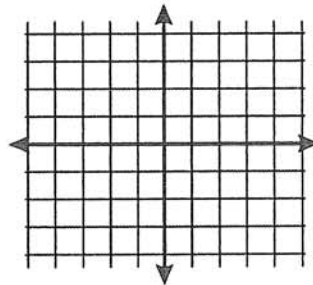
2. $x^2 + y^2 = 64$



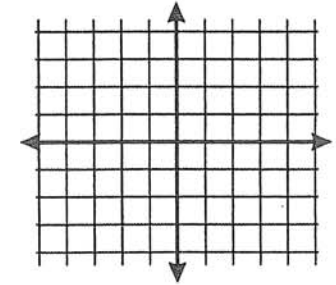
3. $(x - 1)^2 + (y + 1)^2 = 1$



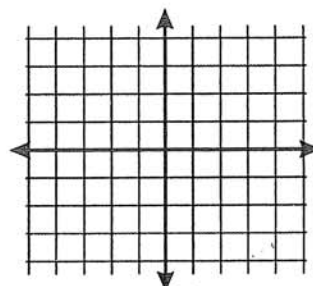
4. $(x - 7)^2 + (y - 2)^2 = 25$



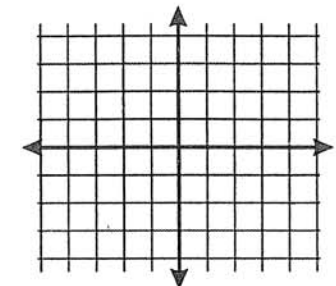
5. $(x + 4)^2 + y^2 = 9$



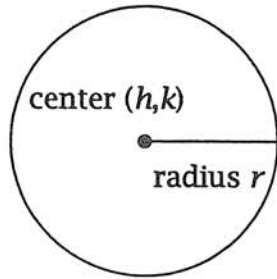
6. $x^2 + (y - 12)^2 = 20$



7. $(x + 6)^2 + (y + 9)^2 = 15$



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



Given the equation for a circle, identify its center and its radius.

Example: $(x - 2)^2 + (y - 3)^2 = 25$
center (2, 3)
radius = 5

1. $(x - 4)^2 + (y + 10)^2 = 144$

2. $x^2 + (y - 7)^2 = 49$

3. $x^2 + y^2 = 1$

4. $(x + 3)^2 + (y + 11)^2 = 15$

5. $(x - 15)^2 + y^2 = 10$

Given the center and the radius of a circle, write the equation describing the circle.

Example: (0, 4), $r = 9$
 $(x - 0)^2 + (y - 4)^2 = 81$
 $x^2 + (y - 4)^2 = 81$

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

2. (-2, 3), $r = 2$

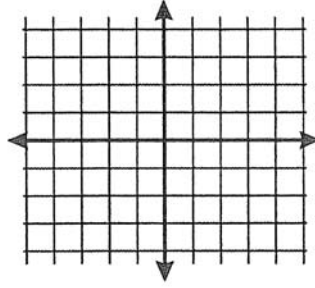
3. (-7, -18), $r = 14$

4. (12, 9), $r = 1$

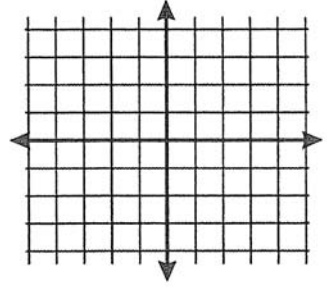
5. (10, 0), $r = 22$

For the following, graph each circle by first completing the square.

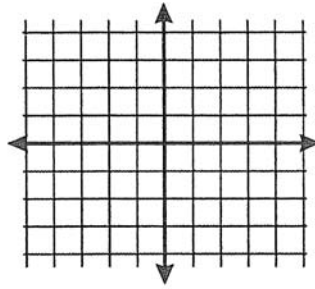
1) $x^2 + y^2 + 2x - 8 = 0$



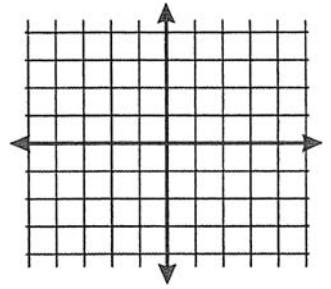
2) $x^2 + y^2 - 4y = 12$



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



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



5) $x^2 + y^2 + 6x - 4y = -12$

