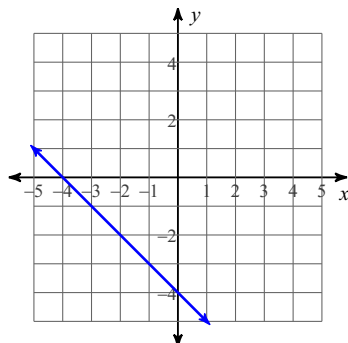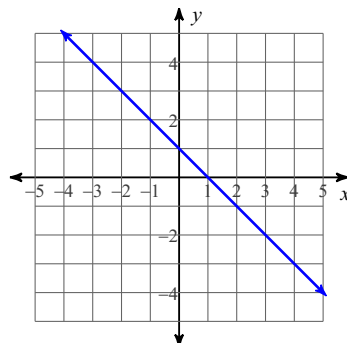Name_____

Activity 0211

Date_____ Period_____

Write the slope-intercept form of the equation of each line.

1)

2)

3) $x + 2y = 10$

4) $5x - 6y = 30$

Write the slope-intercept form of the equation of the line through the given points.
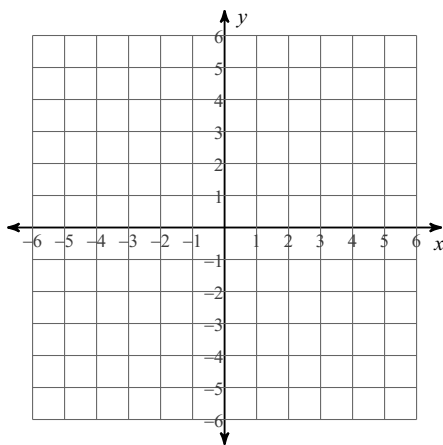
5) through: $(-3, -1)$ and $(-3, 3)$

Write the slope-intercept form of the equation of the line described.
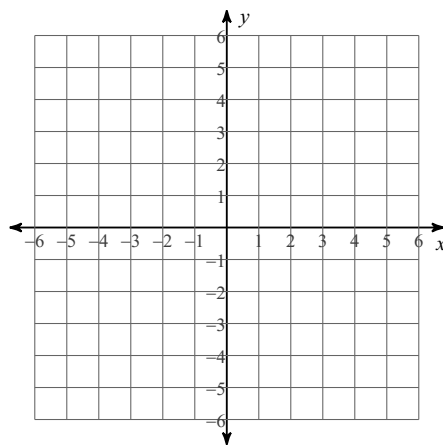
6) through: $(-2, 0)$, parallel to $y = -x + 1$

7) through: $(-1, 0)$, perp. to $y = -\dfrac{1}{3}x - 5$

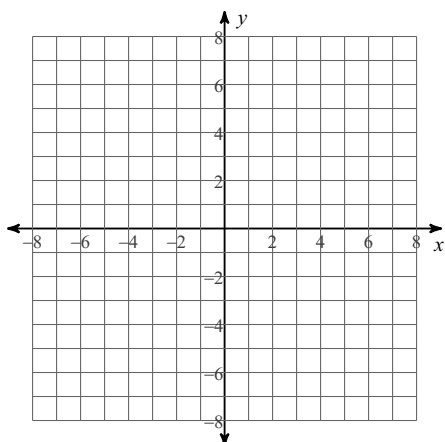**Sketch the graph of each line.**
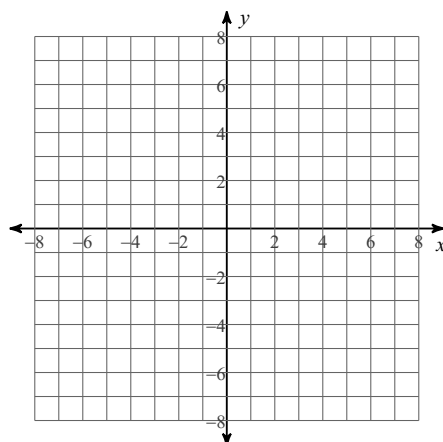
8) $x - 3y = 3$

9) $4x + 5y = 25$

Identify the center and radius of each. Then sketch the graph.

10) $(x + 2)^2 + (y + 3)^2 = 9$

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

Use the information provided to write the equation of each circle.

12) Center: $(0, 4)$
    Radius: $\sqrt{101}$

13) Center: $(7, 13)$
    Radius: 2

14) Ends of a diameter: $(8, -1)$ and $(12, 15)$

15) Center: $(14, -8)$
    Tangent to $y = -10$

16) Center: $(8, -2)$
    Point on Circle: $(1, -5)$

17) Center lies in the third quadrant
    Tangent to $x = 7$, $x = -15$, and $y = 4$

Answers to Activity 0211

1) $y = -x - 4$

2) $y = -x + 1$

3) $y = -\dfrac{1}{2}x + 5$

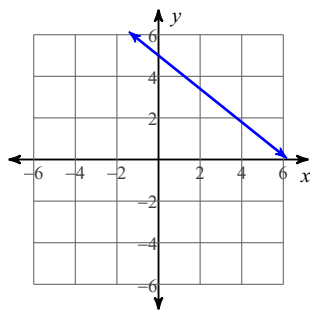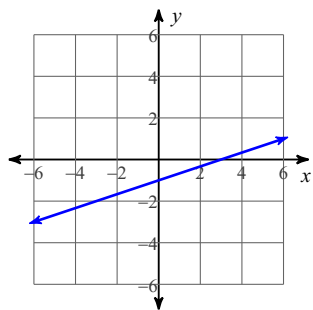4) $y = \dfrac{5}{6}x - 5$
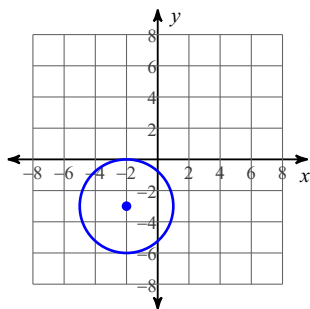
5) $x = -3$

6) $y = -x - 2$
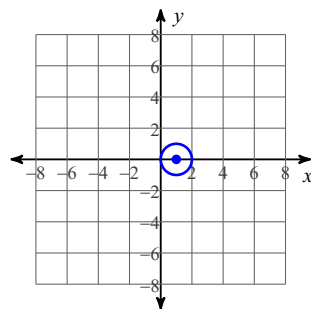
7) $y = 3x + 3$

8)

9)

10)

Center: $(-2, -3)$
Radius: 3

11)

Center: $(1, 0)$
Radius: 1

12) $x^2 + (y - 4)^2 = 101$

13) $(x - 7)^2 + (y - 13)^2 = 4$

14) $(x - 10)^2 + (y - 7)^2 = 68$

15) $(x - 14)^2 + (y + 8)^2 = 4$

16) $(x - 8)^2 + (y + 2)^2 = 58$

17) $(x + 4)^2 + (y + 7)^2 = 121$