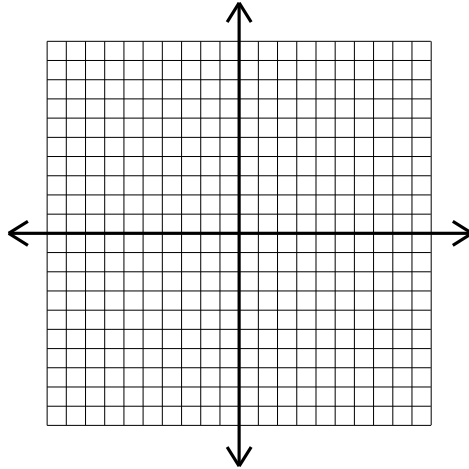**T4-1:** **I can graph equations using given information**
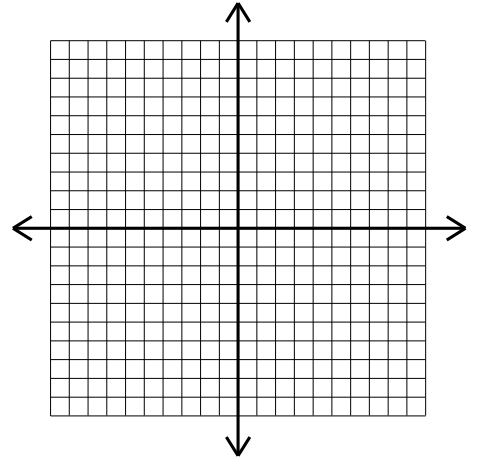**T4-2:** **I can write linear equations in slope intercept form.**
T4-3: **I can write linear equation in point slope form.**
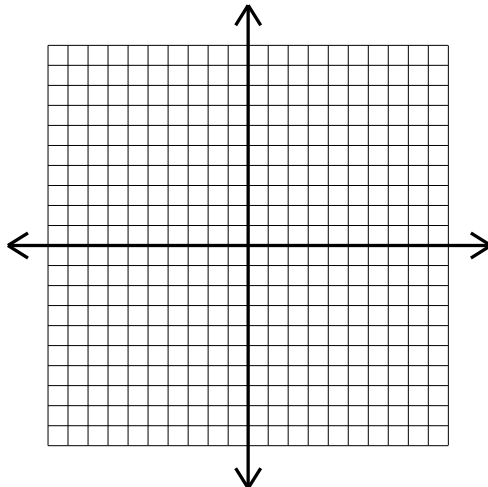**Graph the following equations.**
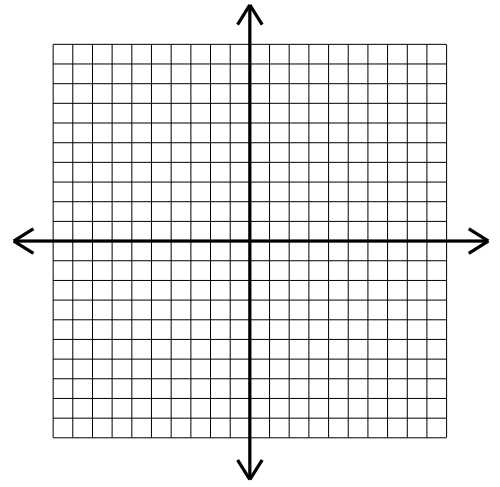
1. $y = -\frac{1}{2}x + 3$

2. $y = 4$

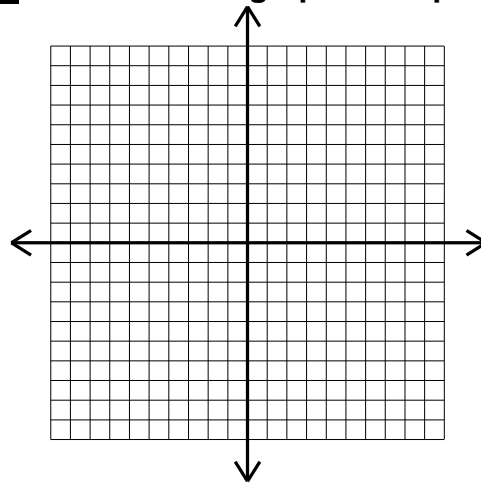3. $-3x - y = -5$

4. $x = -3$

Write an equations for the line in <u>slope intercept</u> form and then graph the equation.

5. Point = (3, 1)
   Slope = 2

Write an equations for the line in <u>slope intercept</u> form and then graph the equation.
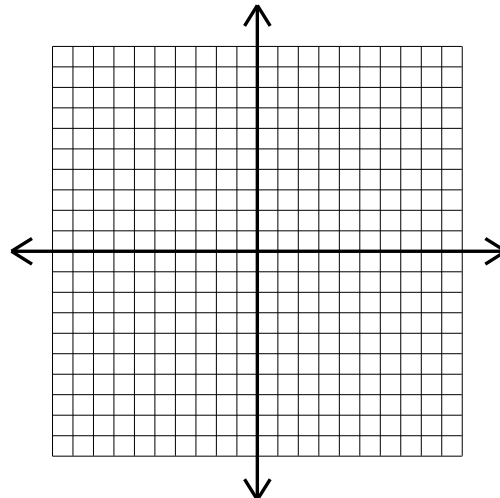
6.

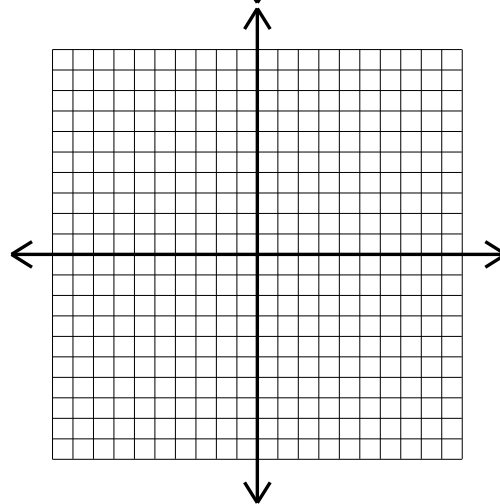| X	Y
3	-1
5	0
7	1
9	2
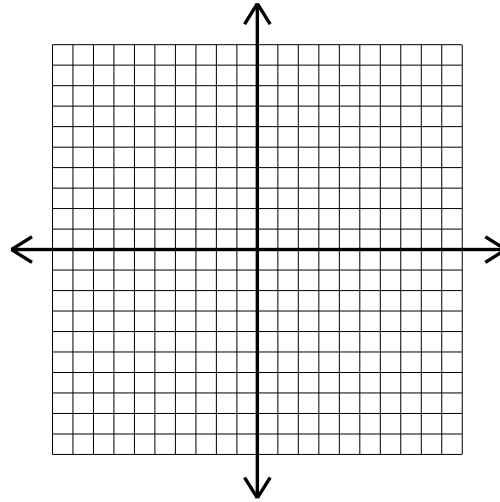
Write equations for the following lines in <u>point slope form</u> and then graph the equation.

7. m = $\frac{4}{3}$ and (-2, 11)

8. (5, -10) and (2, -1)

Manipulate problems 7 and 8 to <u>slope intercept</u> form.

7.   8.

Do not manipulate. What is the <u>slope</u> and the <u>point</u> showing in each equation?

9. $y + 3 = \frac{2}{3}(x - 4)$ 10. $y - 5 = -8(x + 17)$ 11. $y + 10 = -2(x + 1)$

m=_____ point (,   )   **m=_____ point (,   )**   **m=_____ point (,   )**

12. $y - 5 = 6(x - 8)$ 13. $y + 7 = -8(x + 5)$ 14. $y + 2 = -\frac{1}{2}(x - 6)$

m=_____ point (,   )   **m=_____ point (,   )**   **m=_____ point (,   )**

Write equations for the following situations. Use any form!

12. The number of copies of a movie rented at a video kiosk decreased at a constant rate of 5 copies per week. There were 5 copies of the movie rented in the 6th week after the movie released.
    a. **Determine independent and dependent variables.**

    b. **Write an equation.**

    c. **In what week will there only be 20 movie rentals? (Show algebraically)**

13. An airplane 30,000 feet above the ground and begins descending at the rate of 2000 feet per minute. Assume the plane continues at the same rate of descent. The plane's height and minutes above the ground are related to each other.
    a. **Determine independent and dependent variables.**

    b. **Write an equation.**

    c. **What height will the airplane be at after 5 minutes?**

14. Biologists have found that the number of chirps some crickets make per minute is related to temperature. The relationship if very close to being linear. When crickets chirp 124 times a minute, it is about 68 degrees Fahrenheit. When they chirp 172 times a minute, it is about 80 degrees Fahrenheit.
    a. **Determine independent and dependent variables.**

    b. **Write an equation.**

    c. **How warm is it when the crickets are chirping 150 times a minute?**