

# 8.1 Linear Growth & Decay

<http://www.brainpop.com/math/algebra/slopeandintercept/>

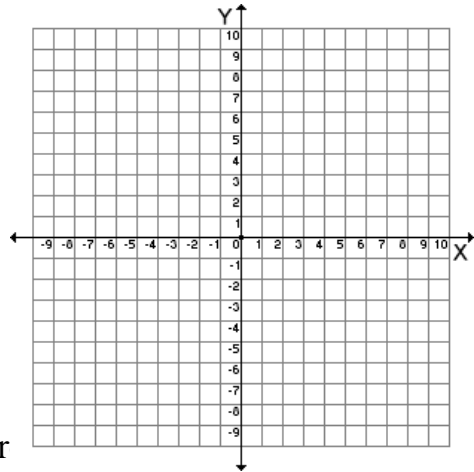


<http://www.brainpop.com/math/algebra/graphinglinearequations/>



$$y = 5x + 3$$

x	y
-1	
0	
1	



Examples

Find the slope and vertical intercept (y-inter)

1.  $y = -\frac{1}{3}x - 1$

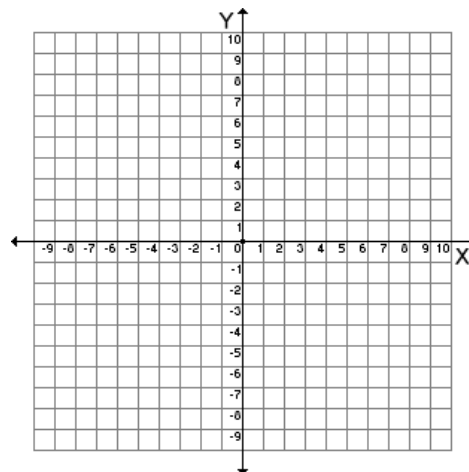
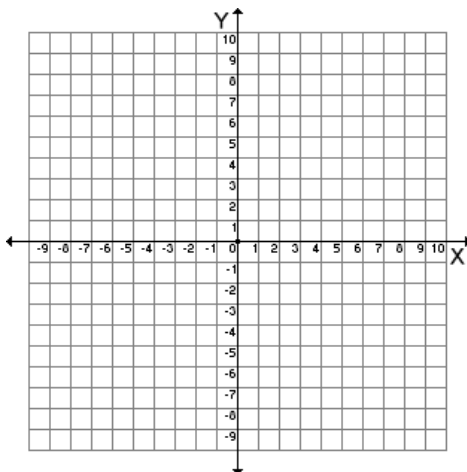
2.  $y = -1 - 8x$

3.  $y = -5x$

Graph the equation using the slope and y-intercept.

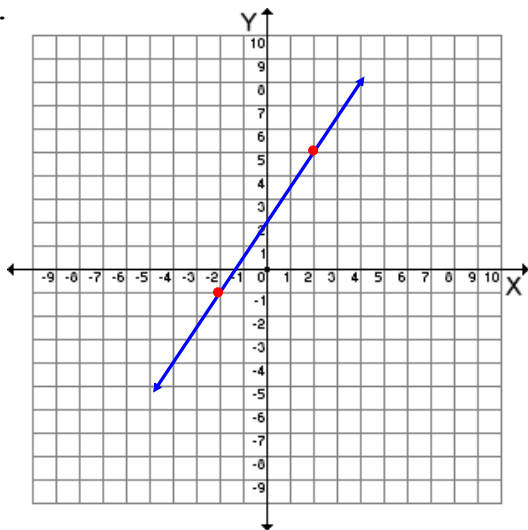
4.  $y = 2x - 5$

5.  $y = 3 - \frac{1}{2}x$

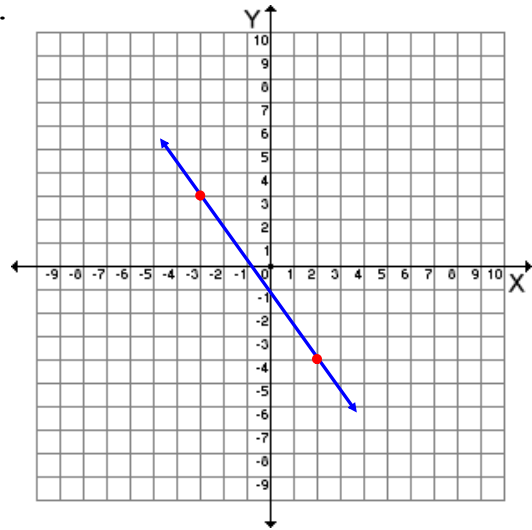


Find the slope and vertical intercept of each line, then write the equation.

6.



7.



Write an equation of the line that has the given slope and y-intercept.

8. slope = -2, and y-intercept = 5

Write an equation.

9. The temperature of a laboratory sample of liquid oxygen is at  $-140^{\circ}\text{C}$ , and is rising at  $17^{\circ}\text{C}$  each minute.