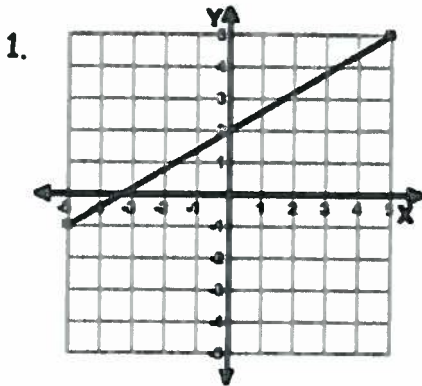


Day 10- Linear Functions Practice Problems

Derive $y=mx+b$ using similar triangles

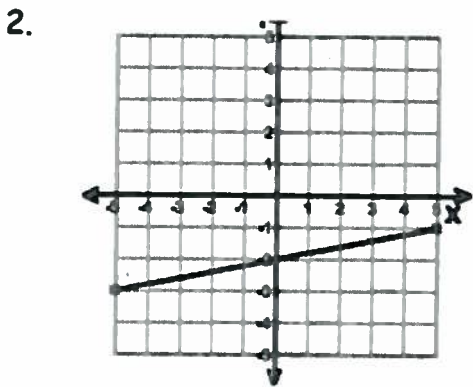
Find the slope, y-intercept (b) and then write the equation to each line. The first one is done for you!



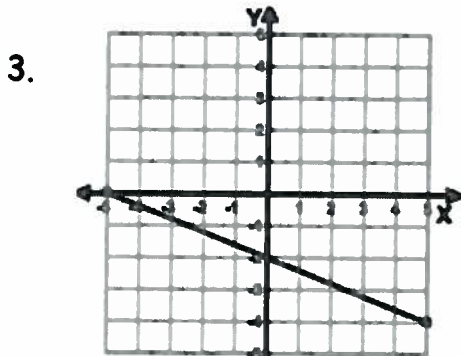
Slope: $\frac{\text{rise}}{\text{run}} = +\frac{3}{5}$

Line crosses y-axis @ 2
y-intercept (b): 2

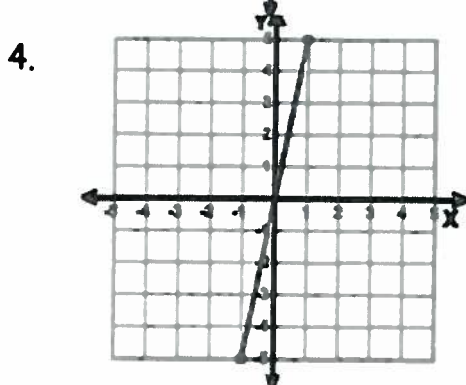
Equation: $y = \frac{3}{5}x + 2$



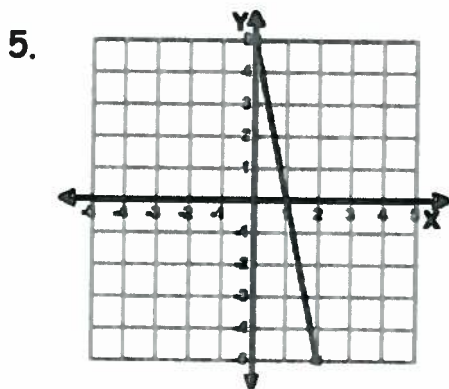
slope: $\frac{2}{10} = \frac{1}{5}$
y-intercept: -2
 $y = \frac{1}{5}x - 2$



m (slope): $-\frac{2}{5}$
y-intercept: -2
 $y = -\frac{2}{5}x - 2$



m: 5
b: 0
 $y = 5x$



$$m : -\frac{5}{1}$$

$$b : 5$$

$$y = -5x + 5$$

Identify the slope and y-intercept (b) of the following equations.

6. $y = 2x - 4$

slope = 2

y-intercept = -4

7. $y = \frac{2}{3}x + 1$

slope = $\frac{2}{3}$

y-intercept = 1

8. $y = -\frac{4}{3}x + 1$

slope = $-\frac{4}{3}$

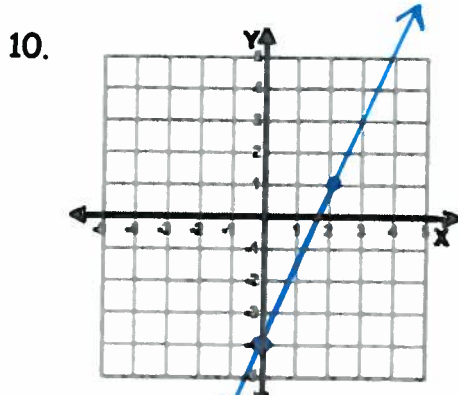
y-intercept = 1

9. $y = -4x + 4$

slope = -4

y-intercept = 4

Try sketching the graph of each line, first indicating slope and y-intercept.



$$y = \frac{5}{2}x - 4$$

slope = $\frac{5}{2}$

y-intercept = -4