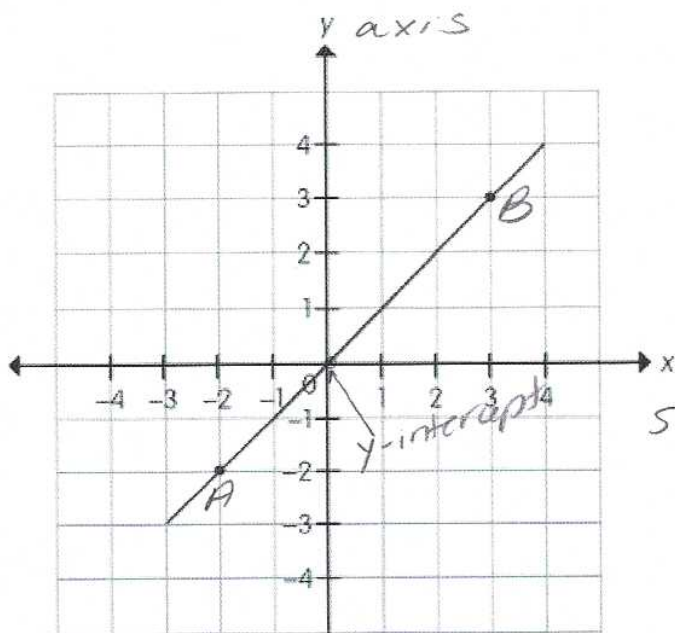


INDEPENDENT PRACTICE



Identify the y -intercept for each line. Then, write an equation in the form $y = mx$ or $y = mx + b$ for each line.

1



(x_1, y_1) (x_2, y_2)
 A(-2, -2) & B(3, 3)

y-intercept: $(0, 0)$
↳ "b"

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{(3) - (-2)}{(3) - (-2)}$$

simplify

$$m = \frac{5}{5} = 1$$

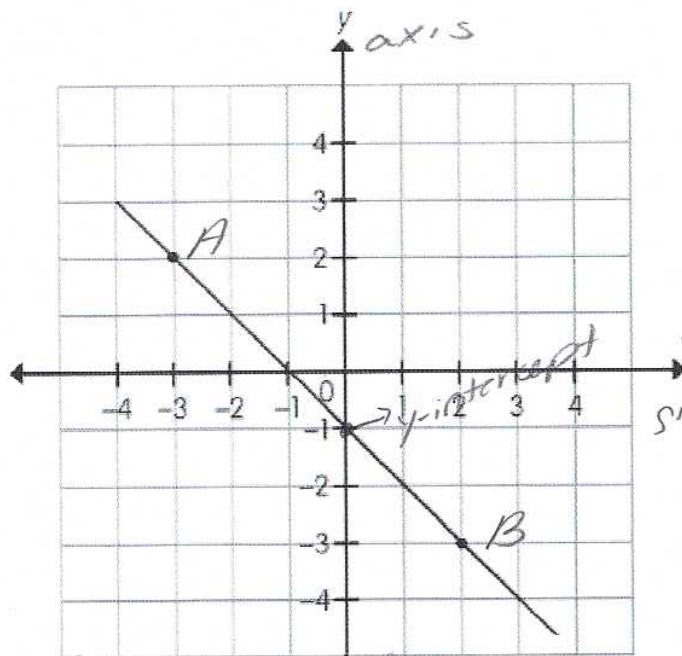
Linear Equation:

$$y = 1x \text{ or } y = x$$

$$y = [m]x + [b]$$

replace

2



(x_1, y_1) (x_2, y_2)
 A(-3, 2) & B(2, -3)

y-intercept: $(0, -1)$
↳ "b"

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{(-3) - (2)}{(2) - (-3)}$$

simplify

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

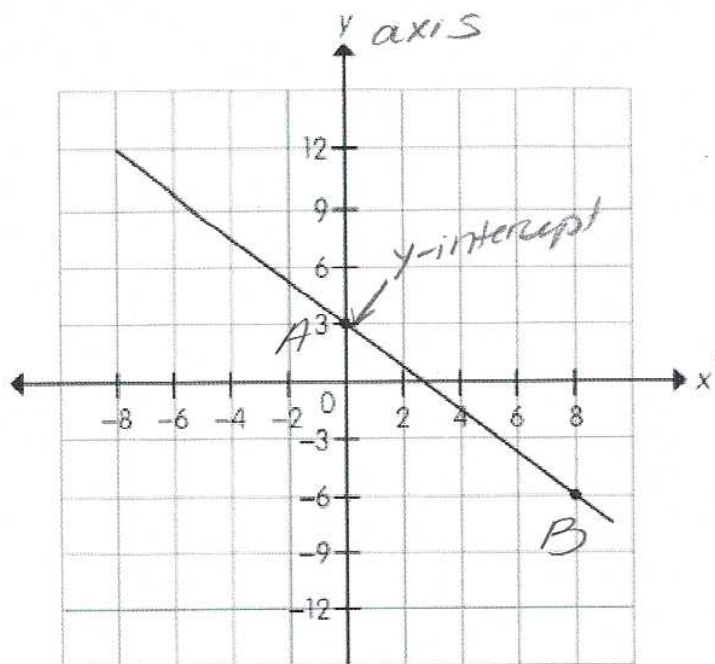
Linear Equation:

$$y = -1x - 1$$

$$y = [m]x + [b]$$

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3



(x_1, y_1) (x_2, y_2)
 A(0, 3) & B(8, -6)

y-intercept: (0, 3)
 "b"

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

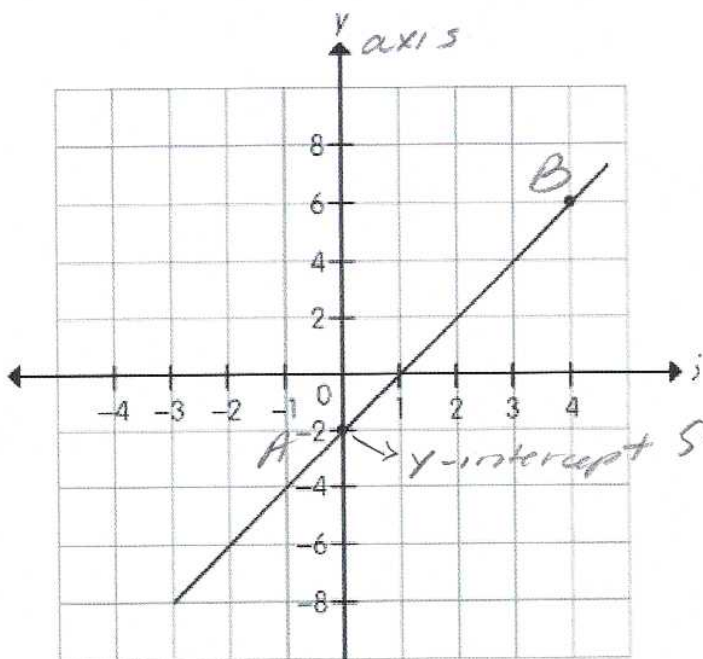
$$m = \frac{(-6) - (3)}{(8) - (0)}$$

$$m = \frac{-9}{8}$$

Linear Equation:

$$\frac{y = -\frac{9}{8}x + 3}{y = \boxed{m}x + \boxed{b}}$$

4



(x_1, y_1) (x_2, y_2)
 A(0, -2) & B(4, 6)

y-intercept: (0, -2)
 "b"

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{(6) - (-2)}{(4) - (0)}$$

Simplify

$$m = \frac{8}{4} = \frac{2}{1}$$

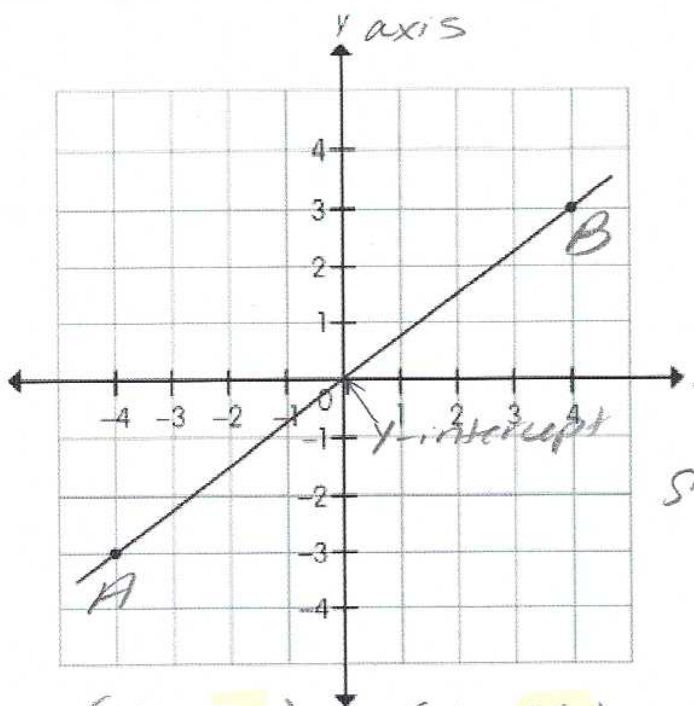
Linear Equation:

$$\frac{y = 2x - 2}{y = \boxed{m}x + \boxed{b}}$$

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Write an equation in the form $y = mx$ or $y = mx + b$ for each line.

5



(x_1, y_1) (x_2, y_2)

A(-4, -3) & B(4, 3)

y-intercept: $(0, 0)$
↓ "b"

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{(3) - (-3)}{(4) - (-4)}$$

simplify

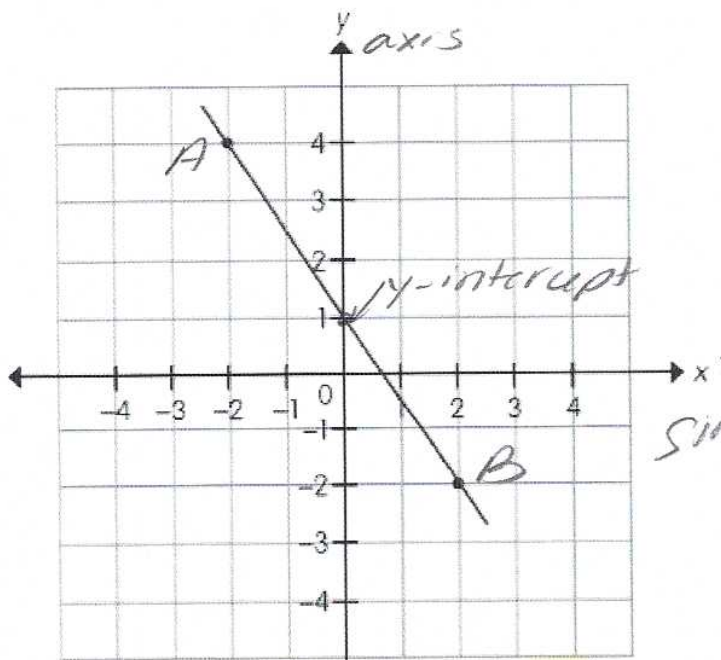
$$m = \frac{6}{8} = \frac{3}{4}$$

Linear Equation:

$$y = \frac{3}{4}x$$

$$y = [m]x + [b]$$

6



(x_1, y_1) (x_2, y_2)

A(-2, 4) & B(2, -2)

y-intercept: $(0, 1)$
↓ "b"

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{(-2) - (4)}{(2) - (-2)}$$

simplify

$$m = \frac{-6}{4} = \frac{-3}{2}$$

Linear Equation:

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

$$y = [m]x + [b]$$