

**Practice with Examples**

For use with pages 269–275

**EXAMPLE 2** *Using a Graph to Write an Equation*

Write an equation of the line shown using slope-intercept form.

**SOLUTION**

Write the slope-intercept form  $y = mx + b$ .

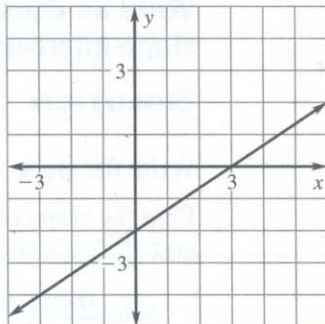
Find the slope of the line. Let  $(0, -2)$  be  $(x_1, y_1)$  and  $(3, 0)$  be  $(x_2, y_2)$ .

$$m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0 - (-2)}{3 - 0} = \frac{2}{3}$$

Use the graph to find the y-intercept  $b$ . The y-intercept is  $-2$ .

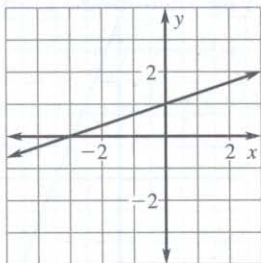
Substitute  $\frac{2}{3}$  for  $m$  and  $-2$  for  $b$  in  $y = mx + b$ .

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

**Exercises for Example 2**

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

5.



6.

