

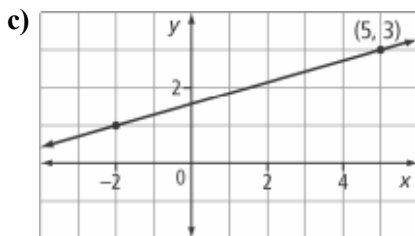
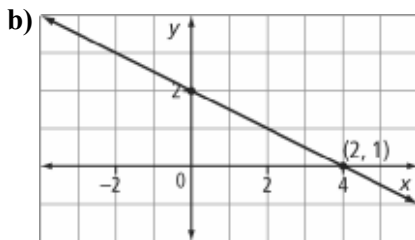
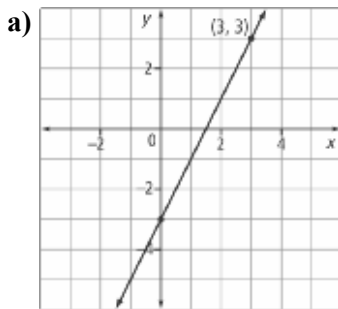
## Section 7.3 Extra Practice

1. Rewrite each equation from slope-point form to slope-intercept form,  $y = mx + b$ , and general form,  $Ax + By + C = 0$ .

a)  $y - 4 = 5(x - 3)$     b)  $y + 1 = \frac{3}{4}(x + 2)$

c)  $y - \frac{1}{2} = x - 5$     d)  $y + \frac{3}{5} = 2\left(x - \frac{3}{2}\right)$

2. Write an equation in slope-point form,  $y - y_1 = m(x - x_1)$ , of each line passing through the given point.



3. Determine the equation of each line using the slope-point form. Then, express each equation in slope-intercept form and in general form.

a)  $(-3, 4)$ ,  $m = -5$     b)  $\left(\frac{1}{2}, 1\right)$ ,  $m = 2$

c)  $(0, 3)$ ,  $m = 3$     d)  $(-5, 0)$ ,  $m = \frac{1}{2}$

4. Use slope-point form to determine an equation of a line through each pair of points. Express each equation in the form  $y = mx + b$  and in the form  $Ax + By + C = 0$ .

a)  $(6, 3)$  and  $(1, -2)$     b)  $(0, 5)$  and  $(6, 3)$

c)  $(-3, 4)$  and  $(-5, 0)$     d)  $(1, 2)$  and  $(-8, 5)$

5. Identify the slope and one point on each line. Sketch a graph of each line.

a)  $y - 3 = \frac{1}{2}(x + 5)$

b)  $y + 4 = \frac{4}{3}(x - 1)$

c)  $y + \frac{2}{3} = 2(x + 1)$

d)  $y - 5 = -4(x + 0.4)$

6. Write the equation of each line using slope-point form. Convert to slope-intercept form.

a) slope of 0 and through  $(-5, -6)$

b) same slope as  $y = 2x - 5$  and through  $(4, 1)$

c) slope of  $-\frac{1}{2}$  and the same  $x$ -intercept as the line  $3x - 2y = 12$

7. What is the equation of each line in slope-point form? Convert each equation to general form.

a) same  $x$ -intercept as the line  $y = 3x - 4$  and through  $(0, 5)$

b)  $x$ -intercept of  $-5$  and  $y$ -intercept of 4

c) same slope as  $2x - 5y + 6 = 0$  and through the origin