

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Learning Goal 0.1**

Expectations for graphing from previous years.

**Example** Find the slope of the line.

a. Between the points  $(-2, 4)$  and  $(3, 6)$ .

b.  $y = 5 - 3x$ .

c.  $y + 1 = -\frac{2}{5}(x - 10)$ .

d. A line parallel to  $4x - 3y = 12$ .

**Example** Find the equation of the line in slope – intercept form.

a. Horizontal line through  $(-2, 5)$ .

b. Through  $(0, 5)$  and  $(-4, -6)$ .

c.  $y$  –intercept of 2 and perpendicular to  
 $y = 3x - 5$

d.  $y - 1 = \frac{2}{3}(x + 9)$

**Example** Find the equation of the line in point – slope form.

a. Through  $(-4, 5)$  and  $(-2, 6)$ .

b.  $x$  – intercept of 5 and parallel to  
 $3x - 5y = 15$

**Example** The sales of a small company have been growing linearly with time. The sales were \$27 000 in its second year of operation and \$63 000 in its fifth year.

a. Find an equation to represent the sales,  $S(t)$ , as a function of time in years,  $t$ , in point – slope form.

b. What will the sales in the company's seventh year?

c. How many years until sales reach \$100 000? What assumptions are you making?