

## Practice 5-7

### ..... Example Exercises

#### Example 1

Find the  $x$ - and  $y$ -intercept of each equation.

1.  $2x + y = 4$       2.  $x + 3y = 9$       3.  $2x + 3y = 6$       4.  $4x - 5y = 10$

Graph each equation.

5.  $x + y = 5$       6.  $x + 3y = -6$       7.  $-5x + 3y = 15$       8.  $3x - 2y = 12$   
 9.  $-x + 4y = 8$       10.  $3x + 2y = 6$       11.  $-2x + 5y = 5$       12.  $5x + 6y = 18$

#### Example 2

Graph each equation using a graphing calculator. Make a sketch of the graph. Include  $X_{min}$ ,  $X_{max}$ ,  $Y_{min}$ ,  $Y_{max}$ , and the  $x$ - and  $y$ -intercepts.

13.  $4x + 5y = 80$       14.  $6x + 7y = 84$       15.  $3x + 10y = 90$       16.  $12x + 5y = 180$   
 17.  $-5x + 16y = 160$       18.  $8x - 6y = -192$       19.  $7x - 5y = 70$       20.  $9x + 7y = -126$

#### Example 3

21. You are buying \$60 worth of a lawn seed mixture that consists of two types of seed. One type costs \$5/lb and the other costs \$6/lb.  
 a. Write an equation to find the amount of each seed that you can buy.  
 b. Graph your equation.
22. Suppose you have two summer jobs. You earn \$4/h baby-sitting and \$5/h weeding gardens. You want to earn \$100.  
 a. Write an equation to find the time you would need to work at each job.  
 b. Graph your equation.  
 c. Use your graph to find two different combinations of hours worked.

#### Example 4

Write an equation for a line through the given point with the given slope using the  $Ax + By = C$  form.

23.  $(2, 5); m = 3$       24.  $(6, 1); m = 5$       25.  $(-2, 4); m = -4$       26.  $(7, -5); m = 2$   
 27.  $(-2, 7); m = \frac{1}{2}$       28.  $(4, 3); m = \frac{3}{2}$       29.  $(-9, 4); m = -\frac{5}{3}$       30.  $(-6, -2); m = -\frac{1}{4}$