

**6.3.D2 – SOLVING MORE SYSTEMS**

Solve each system of equations by substitution. Write your solution as an ordered pair  $(x, y)$ . Refer to the 6.1 example “Solving Systems of Linear Equations Using the Substitution Method” in the Chapter 6 Summary.

1.  $3y = x + 6$   
 $x = 2y - 2$

2.  $y = 2x + 4$   
 $-3y = x - 5$

Solve each system of equations using the linear combinations method. Write your solution as an ordered pair  $(x, y)$ . Refer to the 6.2 example “Solving a System of Equations Using the Linear Combinations Method” in the Chapter 6 Summary.

3.  $x + 2y = 9$   
 $2x - 5y = -27$

4.  $3x + 5y = -18$   
 $4x - 10y = -24$

Define variables and write a system of equations to represent each situation. Solve each system of equations using the appropriate method: either substitution or linear combinations. Write your solution as an ordered pair  $(x, y)$ . Refer to the 6.3 example “Writing a Linear System of Equations to Represent a Problem Context” in the Chapter 6 Summary.

5. Rachel needs to print some of her digital photos. She is trying to choose between Lightning Fast Foto and Snappy Shots. Lightning Fast Foto charges a base fee of \$5 plus an additional \$0.20 per photo. Snappy Shots charges a base fee of \$7 plus an additional \$0.10 per photo. Determine the number of photos for which both stores will charge the same amount.

Let  $x =$  \_\_\_\_\_ &  $y =$  \_\_\_\_\_

Equation 1: \_\_\_\_\_ & Equation 2: \_\_\_\_\_

Solve the system of equations.

Interpret the solution of the linear system in terms of the problem situation. Explain which store Rachel should choose depending on the number of photos she needs to print.

6. Alicia has a booth at the flea market where she sells purses and wallets. All of her purses are the same price and all of her wallets are the same price. The first hour of the day, she sells 10 purses and 6 wallets for a total of \$193. The second hour, she sells 8 purses and 10 wallets for a total of \$183. How much does Alicia charge for each purse and each wallet?

Let  $x =$  \_\_\_\_\_ &  $y =$  \_\_\_\_\_

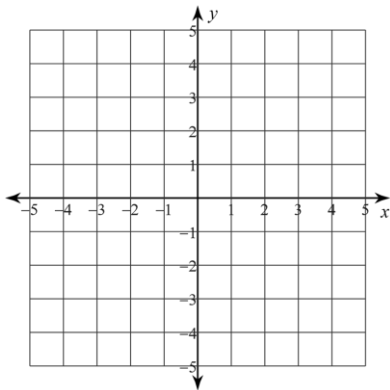
Equation 1: \_\_\_\_\_ & Equation 2: \_\_\_\_\_

Solve the system of equations.

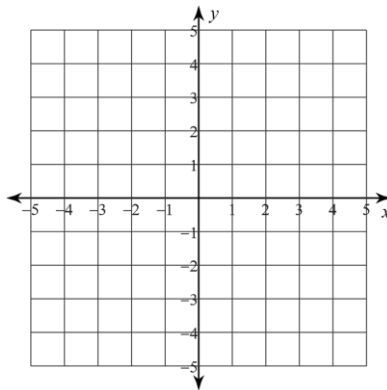
Interpret the solution of the linear system in terms of the problem situation.

Solve the system of linear equations graphically. Write your solution as an ordered pair  $(x, y)$ . Refer to the 6.1 example "Predicting the Solution of a System Using Graphing" in the Chapter 6 Summary.

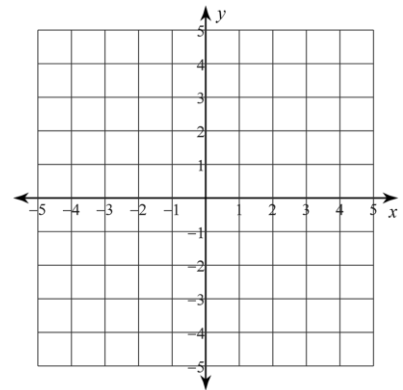
7.  $4x - 3y = -9$   
 $2x + 3y = -9$



8.  $3x + y = 2$   
 $x + 2y = -6$



9.  $5x - 3y = 3$   
 $x - 3y = -9$



### 1<sup>ST</sup> QUARTER REVIEW: FROM CHAPTER 3

First use point-slope form to write the equation of a line that passes through the given point and has the given slope. Then write the equation in slope-intercept form.

10.  $(-5, 5), m = -2$

11.  $(2, -4), m = -3$

12.  $(-4, 5), m = -\frac{3}{2}$