

Additional Practice**Investigation 2****It's In the System**

1. Solve each of the following systems of equations.

a. $y = 3x - 2$
 $y = 2x + 3$

b. $y = 7x + 4$
 $y = 9x - 6$

c. $y = 22x + 4$
 $y = 14x + 28$

d. $y = -x + 9$
 $y = 2x + 30$

e. $y = 2x + 6$
 $y = x + 3$

f. $y = -5x + 8$
 $y = -2x - 7$

Additional Practice *(continued)***Investigation 2****It's In the System**

2. Rewrite the following equations in equivalent $y = mx + b$ form:

a. $2x + 3y + 6 = 0$

b. $-5x + 10y + 15 = 0$

c. $-6x - 2y - 3 = 0$

d. $-4x + y = 0$

e. $4x - 4y + 2 = 0$

f. $150x + 50y - 25 = 0$

3. Rewrite each of the equations in Exercise 2 in equivalent $x = ny + c$ form.

Additional Practice *(continued)***Investigation 2****It's In the System**

4. Solve each of the following systems of equations by substitution.

a. $3x + 2y = 14$
 $y = x + 2$

b. $4x - 2y = 24$
 $y = x - 5$

c. $-3x + 51 = 8y$
 $y = -6x$

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

e. $x = 5y - 26$
 $6x + y = -1$

f. $7x - 2y = 18$
 $x = y$

Additional Practice *(continued)***Investigation 2****It's In the System**

5. Solve each of the following systems of equations by combination.

a. $2x - 4y = 10$
 $-2x + 6y = -4$

b. $7x + 10y = 6$
 $7x - 10y = 8$

c. $6x - 7y = -4$
 $-4x - 7y = 26$

d. $x + y = 3$
 $x - y = -9$

e. $-5x - 6y = 16$
 $-5x + 8y = 4$

f. $3x - 2y = 12$
 $-3x + 4y = -8$

Additional Practice: Digital Assessments

Investigation 2

It's In the System

6. Which are included in the solution of the system of equations? *Select all that apply.*

$$3x + y = 1$$

$$x - 3y = 7$$

$x = -2$

$x = 1$

$x = 2$

$y = -2$

$y = 1$

$y = 7$

7. A car rental company rents vehicles to groups. One group rented 5 vans and 2 cars to fit 70 people. Another group rented 3 vans and 4 cars to fit 56 people. Each vehicle was completely filled. Circle the numbers that make the statements true.

a. The number of people that will fit in

one van is $\begin{bmatrix} 4 \\ 5 \\ 8 \\ 12 \\ 17 \end{bmatrix}$.

b. The number of people that will fit in

one car is $\begin{bmatrix} 4 \\ 5 \\ 8 \\ 12 \\ 17 \end{bmatrix}$.

8. What is each equation in $x = ny + c$ form? Write each equation in the appropriate box.

$$2x - 6y - 2 = 0 \quad y = \frac{1}{2}x + 1 \quad 3x - 6y = -6 \quad y = \frac{1}{3}(x - 1) \quad x - 3y = 1$$

$$x = 3y + 1$$

$$x = 2y - 2$$

Skill: Substitution Method for Linear Systems**Investigation 2****It's In the System**

Solve each system of equations using substitution.

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

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

3. $x = -2y + 1$
 $x = y - 5$

4. $x + 2y = 200$
 $x = y + 50$

Skill: Substitution Method for Linear Systems (cont.)**Investigation 2****It's In the System**

Solve each system of equations using substitution.

5.
$$\begin{aligned} 3x - 2y &= 0 \\ x + 2y &= -8 \end{aligned}$$

6.
$$\begin{aligned} 2x + 4y &= -6 \\ x - 3y &= 7 \end{aligned}$$

7.
$$\begin{aligned} 5x - 3y &= -4 \\ 5x + 3y &= -6 \end{aligned}$$

8.
$$\begin{aligned} 3x - y &= 4 \\ 2x + y &= 16 \end{aligned}$$

Skill: Combination Method for Linear Systems**Investigation 2****It's In the System**

Solve each system of equations by combination.

1. $x + 2y = 7$
 $3x - 2y = -3$

2. $3x + y = 20$
 $x + y = 12$

3. $5x + 7y = 77$
 $5x + 3y = 53$

4. $2x + 5y = -1$
 $x + 2y = 0$

Skill: Combination Method for Linear Systems (cont.)**Investigation 2**

It's In the System

Solve each system of equations by combination.

5.
$$\begin{aligned} 3x + 6y &= 6 \\ 2x - 3y &= 4 \end{aligned}$$

6.
$$\begin{aligned} 2x + y &= 3 \\ -2x + y &= 1 \end{aligned}$$

7.
$$\begin{aligned} 4x - y &= 6 \\ 3x + 2y &= 21 \end{aligned}$$

8.
$$\begin{aligned} 2x - 3y &= -11 \\ 3x + 2y &= 29 \end{aligned}$$