LESSON Practice A

HW Due Griday

6-3 Solving Systems by Elimination

Fill in the blanks to solve each system by elimination.

1.
$$\begin{cases} x + 3y = 14 \\ 2x - 3y = -8 \end{cases}$$

Add the equations:

$$x + 3y = 14
 +2x - 3y = 28$$

$$3x + _{--} = 6$$

Substitute _____ for *x* in one of the equations:

$$x + 3y = 14$$

$$_{---}$$
 + 3 y = 14

2.
$$\begin{cases} 2x + 2y = 4 \\ 3x + 2y = 7 \end{cases}$$

Subtract the equations:

$$2x + 2y = 4$$

- $(3x + 2y = 7)$

Or

$$2x + 2y = 4$$

Substitute ____ for *x* in one of the equations:

$$3x + 2y = 7$$

$$3(__) + 2y = 7$$

$$+ 2y = 7$$

3.
$$\begin{cases} 3x + 4y = 26 \\ x - 2y = -8 \end{cases}$$

Multiply the second equation by 2. Then, add the equations:

$$\int 3x + 4y = 26$$

$$2(x-2y=-8)$$

$$3x + 4y = 26$$

$$x + 0 =$$
_____ $x =$ ____

Substitute $__$ for x in one of the equations:

$$x - 2y = -8$$

$$_{-}$$
 - 2 $y = -8$

Solve each system by elimination.

4.
$$\begin{cases} 3x - 2y = 1 \\ 2x + 2y = 14 \end{cases}$$

5.
$$\begin{cases} x + y = 4 \\ 3x + y = 16 \end{cases}$$

6.
$$\begin{cases} 3x + 2y = -26 \\ 2x - 6y = -10 \end{cases}$$

7. The sum of two numbers is -1. When twice the first number and four times the second number are added, the sum is -10. What are the two numbers?

TEKS A.8.A



Practice B

63 Solving Systems by Elimination

Follow the steps to solve each system by elimination.

1.
$$\begin{cases} 2x - 3y = 14 \\ 2x + y = -10 \end{cases}$$

Subtract the second equation:

$$2x - 3y = 14 - (2x + y = -10)$$

2.
$$\begin{cases} 3x + y = 17 \\ 4x + 2y = 20 \end{cases}$$

Multiply the first equation by -2. Then, add the equations:

$$\frac{x - y = y}{+4x + 2y = 20}$$

Solve the resulting equation:

Use your answer to find the value of x:

Solution: (

Solve the resulting equation:

Use your answer to find the value of y:

Solve each system by elimination. Check your answer.

3.
$$\begin{cases} x + 3y = -7 \\ -x + 2y = -8 \end{cases}$$

4.
$$\begin{cases} 3x + y = -26 \\ 2x - y = -19 \end{cases}$$

5.
$$\begin{cases} x + 3y = -14 \\ 2x - 4y = 32 \end{cases}$$

6.
$$\begin{cases} 4x - y = -5 \\ -2x + 3y = 10 \end{cases}$$

7.
$$\begin{cases} y - 3x = 11 \\ 2y - x = 2 \end{cases}$$

8.
$$\begin{cases} -10x + y = 0 \\ 5x + 3y = -7 \end{cases}$$

Solve.

- 9. Brianna's family spent \$134 on 2 adult tickets and 3 youth tickets at an amusement park. Max's family spent \$146 on 3 adult tickets and 2 youth tickets. What is the price of a youth ticket?
- 10. Carl bought 19 apples of 2 different varieties to make a pie. The total cost of the apples was \$5.10. Granny Smith apples of each type of apple did Carl buy?