

TEKS 2A.3.B

Use A Separate Sheet of Paper!!!



LESSON

3-2

## Practice B

### Using Algebraic Methods to Solve Linear Systems

Use substitution to solve each system of equations.

1. 
$$\begin{cases} x = 7y - 4 \\ 2x - 3y = 14 \end{cases}$$

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

3. 
$$\begin{cases} 3x - 4y = 20 \\ y - 2x = 0 \end{cases}$$

Use elimination to solve each system of equations.

4. 
$$\begin{cases} x + 6y = 1 \\ 3x + 5y = -10 \end{cases}$$

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

6. 
$$\begin{cases} 3x - 5y = 1 \\ 2x + 3y = -12 \end{cases}$$

Use substitution or elimination to solve each system of equations.

7. 
$$\begin{cases} x + y = 13 \\ 2x - 3y = 1 \end{cases}$$

8. 
$$\begin{cases} 9x + 2y = 5 \\ 3x - y = -10 \end{cases}$$

9. 
$$\begin{cases} 2x + y = 1 \\ x = 5 + y \end{cases}$$

10. 
$$\begin{cases} x = -8y \\ x + y = 14 \end{cases}$$

11. 
$$\begin{cases} 2x + 4y = 12 \\ -3x + 3y = 63 \end{cases}$$

12. 
$$\begin{cases} 5x - 2y = -1 \\ 3x - y = -2 \end{cases}$$

Solve.

13. Bill leaves his house for Makayla's house riding his bicycle at 8 miles per hour. At the same time, Makayla leaves her house heading toward Bill's house walking at 3 miles per hour.

- a. Write a system of equations to represent the distance,  $d$ , each is from Makayla's house in  $h$  hours. They live 8.25 miles apart.

- b. Solve the system to determine how long they travel before meeting.

## LESSON

**Practice C**

Use A Separate Sheet of Paper!!!

**3-2****Using Algebraic Methods to Solve Linear Systems**

Use substitution or elimination to solve each system of equations.

1. 
$$\begin{cases} x = y - 5.2 \\ 2x + 3y = 9.6 \end{cases}$$

2. 
$$\begin{cases} 3x - 4y = 5 \\ x = y + \frac{1}{2} \end{cases}$$

3. 
$$\begin{cases} x + 4y = \frac{1}{4} \\ 4x - 3y = 39 \end{cases}$$

4. 
$$\begin{cases} 2x + 20y = 3 \\ 2x = -7y - 10 \end{cases}$$

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

6. 
$$\begin{cases} 3x + 4y = 35 \\ 4x - 2y = 21 \end{cases}$$

7. 
$$\begin{cases} 3\frac{1}{4}x + 3y = 42 \\ 5x = 4y \end{cases}$$

8. 
$$\begin{cases} 5x - 5y = 6 \\ 4x + 7y = -4 \end{cases}$$

9. 
$$\begin{cases} 2x - 8y = 24 \\ x - 21 = 16y \end{cases}$$

**Solve.**

10. Cora bought 4 pounds of nuts and 2 pounds of raisins for \$23.50. Mark bought 2 pounds of nuts and 4 pounds of raisins for \$18.50.

a. Write a system of equations that represents the price of the nuts,  $n$ , and the price of the raisins,  $r$ . \_\_\_\_\_

b. Solve the system. How much should a pound of nuts and a pound of raisins cost together? \_\_\_\_\_

11. Kate and Riley are reading the same book. Kate reads
- $\frac{1}{3}$
- page per minute, and Riley reads
- $\frac{3}{4}$
- page per minute. Kate has already read 70 pages, while Riley has read 30 pages. If they both resume reading together, eventually Riley will catch up to Kate.

a. On what page will that occur?  
\_\_\_\_\_b. How many minutes have they read when Riley catches up?  
\_\_\_\_\_

## Note Cards #14 & #15 – Answer Choices

1.  $\left(7, 3\frac{1}{2}\right)$

2.  $(-5, 1)$

3.  $(-3, -7)$

4.  $\left(-3, -3\frac{1}{2}\right)$

5.  $\left(\frac{2}{5}, -\frac{4}{5}\right)$

6.  $(-1, 7)$

7.  $(-3, -4)$

8.  $(16, -2)$

9.  $\left(-8\frac{1}{2}, 1\right)$

10.  $(-3, -2)$