

Name: .....

Date: ..... Score: .....

## Linear Equations Worksheet

Solve each pair of linear equations by substitution

1  $-5x + y = -7$   
 $-3x - 2y = -12$

2  $-2x + 6y = 6$   
 $-7x + 8y = -5$

3  $-5x - y = 21$   
 $-4x + y = 6$

4  $y = -3x$   
 $4x - 2y = -20$

5  $x = 3y + 1$   
 $2x + 4y = 12$

6  $-5x - 8y = 17$   
 $2x - 7y = -17$

7  $x + 9y = -1$   
 $2x + 4y = 5$

8  $x - y = 11$   
 $3x + 10y = -6$

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## Linear Equations Worksheet

### Answers

$$\begin{aligned} \boxed{1} \quad & -5x + y = -7 \\ & -3x - 2y = -12 \end{aligned}$$

$$x = 2, y = 3$$

$$\begin{aligned} \boxed{2} \quad & -2x + 6y = 6 \\ & -7x + 8y = -5 \end{aligned}$$

$$x = 3, y = -6$$

$$\begin{aligned} \boxed{3} \quad & -5x - y = 21 \\ & -4x + y = 6 \end{aligned}$$

$$x = -3, y = -6$$

$$\begin{aligned} \boxed{4} \quad & y = -3x \\ & 4x - 2y = -20 \end{aligned}$$

$$y = 6, y = -2$$

$$\begin{aligned} \boxed{5} \quad & x = 3y + 1 \\ & 2x + 4y = 12 \end{aligned}$$

$$x = 4, y = 1$$

$$\begin{aligned} \boxed{6} \quad & -5x - 8y = 17 \\ & 2x - 7y = -17 \end{aligned}$$

$$x = \frac{1}{3}, y = -\frac{7}{3}$$

$$\begin{aligned} \boxed{7} \quad & x + 9y = -1 \\ & 2x + 4y = 5 \end{aligned}$$

$$x = \frac{7}{2}, y = -\frac{1}{2}$$

$$\begin{aligned} \boxed{8} \quad & x - y = 11 \\ & 3x + 10y = -6 \end{aligned}$$

$$x = 8, y = -3$$