

## ALGEBRA 1

### 6.2 Worksheet - SOLVING SYSTEMS OF EQUATIONS BY SUBSTITUTION

**Directions:** Solve each problem by substitution, then state the solution and type of system.

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

1. Solution:

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Type of system:

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2. 
$$\begin{cases} 4x + y = 11 \\ 2x + 5y = 1 \end{cases}$$

2. Solution:

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Type of system:

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3. 
$$\begin{cases} 2y = x + 2 \\ 6x - 12y = 0 \end{cases}$$

3. Solution:

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Type of system:

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

4. Solution:

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Type of system:

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

5. Solution:

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Type of system:

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$$6. \begin{cases} x = 2y - 5 \\ 2x + 3y = 18 \end{cases}$$

6. Solution:

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Type of system:

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$$7. \begin{cases} y = 5x - 3 \\ y = 8x + 4 \end{cases}$$

7. Solution:

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Type of system:

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$$8. \begin{cases} 4x + 2y = 5 \\ -2x = y + 4 \end{cases}$$

8. Solution:

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Type of system:

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1. <b>Soln:</b> (4, -3) <b>Type:</b> Consistent & Independent	2. <b>Soln:</b> (3, -1) <b>Type:</b> Consistent & Independent	3. <b>Soln:</b> No Solution <b>Type:</b> Inconsistent	4. <b>Soln:</b> (-3, 2) <b>Type:</b> Consistent & Independent
5. <b>Soln:</b> Infinite Solns <b>Type:</b> Consistent & Dependent	6. <b>Soln:</b> (3, 4) <b>Type:</b> Consistent & Independent	7. <b>Soln:</b> $\left(-\frac{7}{3}, -\frac{44}{3}\right)$ <b>Type:</b> Consistent & Independent	8. <b>Soln:</b> No Solution <b>Type:</b> Inconsistent

