

Solving Two Equations—Addition/Elimination Method I

Solve the following problems by using the elimination method. Write the point of intersection on the line provided.

Problem 1 is modeled for you below:

Solutions:

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

<p><i>Add equations together.</i></p> $x + y = 2$ $x - y = 0$ <hr style="width: 20%; margin-left: 0;"/> $2x = 2$ <p>Therefore $x = 1$</p>	<p><i>Now substitute into equation.</i></p> $1 + y = 2$ $1 - y = 0$ <p><i>In each case, $y=1$ to make the equation true.</i></p>
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$x = 1, y = 1$

(1,1) is the point of intersection for the two equations, the solution to the system of equations.

2. $x + 3y = 5$
 $5x - 3y = 7$

3. $2x + 2y = 0$
 $4x - 2y = 12$

4. $9x - 8y = 12$
 $9x - 4y = 24$

5. $5x - 2y = -13$
 $2x + y = 11$

Solving Two Equations—The Substitution Method II

Solve the equations below for x and y . Then place the y -values in the squares of the cross-number puzzle at the bottom of the page. Use a separate sheet of paper for your work.

Across

1. $x + y = 25$ $x =$ _____
 $y = 4x$ $y =$ _____

2. $x = y + 8$ $x =$ _____
 $2x + y = 52$ $y =$ _____

3. $3x = y$ $x =$ _____
 $2x = y - 10$ $y =$ _____

5. $3x + y = 33$ $x =$ _____
 $x = y - 13$ $y =$ _____

7. $x - y = -10$ $x =$ _____
 $3x = y + 18$ $y =$ _____

Down

1. $x + y = 34$ $x =$ _____
 $y = x + 14$ $y =$ _____

2. $y = 5x$ $x =$ _____
 $6x - y = 2$ $y =$ _____

4. $2x - y = 6$ $x =$ _____
 $x - y = -4$ $y =$ _____

6. $y + 3x = 28$ $x =$ _____
 $4x + y = 10$ $y =$ _____

7. $x + y = 30$ $x =$ _____
 $y = x + 16$ $y =$ _____

