


1. $2x + 3y = 5$ $-x + 2y = 8$	Original Problem
$\begin{array}{r} 2x + 3y = 5 \\ 2[-x + 2y = 8] \end{array}$	I need to make one set of terms opposites, so I'm going to focus on the x terms. If I multiply the 2 nd equation by 2, then I'll have a 2x and -2x.
$\begin{array}{r} 2x + 3y = 5 \\ -2x + 4y = 16 \\ \hline 7y = 21 \end{array}$ $\frac{7y}{7} = \frac{21}{7}$ $y = 3$	<p>Multiply 2 by every term in the 2nd equation. Then draw a line and add the two equations.</p> <p>Solve for y by dividing by 7 on both sides.</p>
$\begin{array}{r} 2x + 3y = 5 \\ 2x + 3(3) = 5 \\ 2x + 9 = 5 \\ 2x + 9 - 9 = 5 - 9 \\ 2x = -4 \\ \frac{2x}{2} = \frac{-4}{2} \end{array}$ $x = -2$	Choose 1 of the equations and substitute your value for y into the equation. I substituted 3 for y. Then solve for x.
My solution to this system is $(-2, 3)$	Your solution is the x and y value written as an ordered pair.
Check:	Substitute:
$\begin{array}{r} 2x + 3y = 5 \\ 2(-2) + 3(3) = 5 \\ -4 + 9 = 5 \end{array}$ 	$\begin{array}{r} -x + 2y = 8 \\ -(-2) + 2(3) = 8 \\ 2 + 6 = 8 \end{array}$ 