



# Fill In The Blanks...



Simultaneous Equations (same x coefficient)

Question	Add or Subtract?	Carry out addition or subtraction	Work out y	Substitute y into one equation	Work out x	Check using other equation	State both answers
$x + 3y = 13$ $x + y = 7$	Subtract	$\begin{array}{r} x + 3y = 13 \\ - x + y = 7 \\ \hline 2y = 6 \end{array}$	$y = 3$	$x + 3y = 13$ $x + 9 = 13$	$x = 4$	$x + y = 7$ $4 + 3 = 7$ ✓	$x = 4$ $y = 3$
$3x + y = 19$ $3x - 4y = 14$	Subtract	$\begin{array}{r} 3x + y = 19 \\ - 3x - 4y = 14 \\ \hline 5y = 5 \end{array}$	$y = 1$	$3x + y = 19$ $3x + 1 = 19$ $3x = 18$	$x = 6$	$3x - 4y = 14$ $18 - 4 = 14$ ✓	$x = 6$ $y = 1$
$x + 5y = 22$ $-x + 2y = 6$	Add	$\begin{array}{r} x + 5y = 22 \\ + -x + 2y = 6 \\ \hline 7y = 28 \end{array}$	$y = 4$	$x + 5y = 22$ $x + 20 = 22$	$x = 2$	$-x + 2y = 6$ $-2 + 8 = 6$ ✓	$x = 2$ $y = 4$
$2x - 5y = 25$ $2x + 3y = 1$	Subtract	$\begin{array}{r} 2x - 5y = 25 \\ - 2x + 3y = 1 \\ \hline -8y = 24 \end{array}$	$y = -3$	$2x - 5y = 25$ $2x + 15 = 25$ $2x = 10$	$x = 5$	$2x + 3y = 1$ $10 + (-9) = 1$ ✓	$x = 5$ $y = -3$
$-3x + y = 10$ $3x + 2y = 11$	Add	$\begin{array}{r} -3x + y = 10 \\ + 3x + 2y = 11 \\ \hline 3y = 21 \end{array}$	$y = 7$	$-3x + y = 10$ $-3x + 7 = 10$ $-3x = 3$	$x = -1$	$3x + 2y = 11$ $-3 + 14 = 11$ ✓	$x = -1$ $y = 7$
$x + 2y = -7$ $x - 6y = 5$	Subtract	$\begin{array}{r} x + 2y = -7 \\ - x - 6y = 5 \\ \hline 8y = -12 \end{array}$	$y = -1.5$	$x + 2y = -7$ $x - 3 = -7$	$x = -4$	$x - 6y = 5$ $-4 - (-9) = 5$ ✓	$x = -4$ $y = -1.5$