Systems of Equations: Addition

Name: _____

Period:

Solve each system using the addition method. Report solutions as ordered pairs, (x,y).

1) $\begin{cases} 2x + y = 12 \\ 3x - y = 3 \end{cases}$

2) $\begin{cases} -4x + y = 11 \\ 4x - 3y = -25 \end{cases}$

3) $\begin{cases} 3x + 5y = 1 \\ -3x + 2y = 13 \end{cases}$

4) $\begin{cases} 2y + 5x = -25 \\ -5x - y = 35 \end{cases}$

5) $\begin{cases} x + ky = 30 \\ -3x + 7y = -34 \end{cases}$

a) What does the value 'k' have to be in order to use the addition method?

b) With the value determined from part a (above), use it to solve the system of equations.

6) $\begin{cases} 2x + y - z = -1 \\ x + 2y + z = 1 \\ x - y - z = 0 \end{cases}$

a) Use the first and the second equations to eliminate 'z.' The result will be a new equation.

b) Use the second and the third equations to eliminate 'z.' The result will be a new equation.

c) Use your two new equations to solve for 'x' and for 'y.'