

F. Math 3 : SOE (All Methods)

State how many solutions each of the following systems of equations has. (*One solution, No solution, Infinitely many solutions*) Show your work.

1) $5x - y = 3$
 $y = 5x - 3$

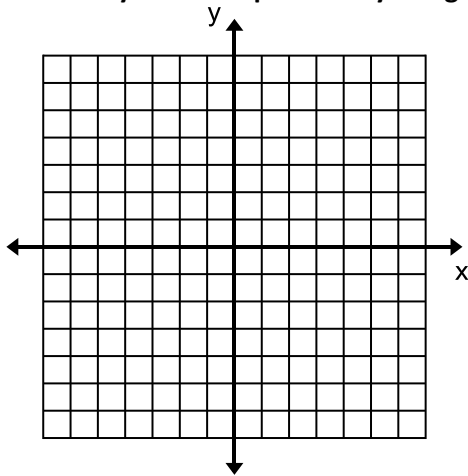
2) $12x - 9y = 27$
 $8x - 6y = 18$

3) $x + y = 6$
 $3x + 3y = 3$

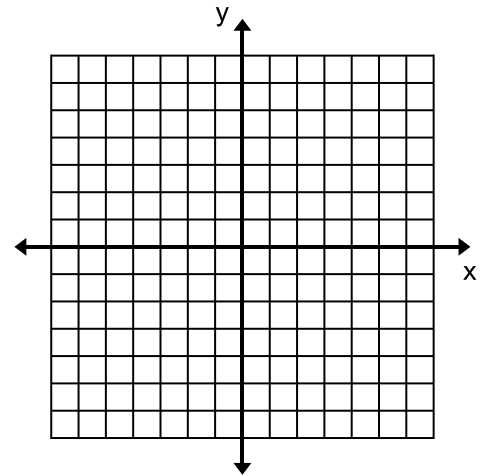
4) $2x - 3y = 7$
 $2x + 3y = 7$

Find the solution to each system of equations by using the GRAPHING method.

5) $y - 2x = 8$
 $y = \frac{1}{2}x - 4$



6) $3x + 2y = 12$
 $x - 2y = 4$



Solve each system of equations by using the SUBSTITUTION method.

7) $c + d = 5$
 $2c - d = 4$

8) $7y - 2x = 10$
 $-3y + x = -3$

9) $x + 3y = 8$
 $\frac{1}{3}x + y = 9$

Solve each system of equations by using the ELIMINATION method.

$$\begin{array}{l} 10) \quad 4x - 2y = -2 \\ \quad \quad 3x + 2y = 30 \end{array}$$

$$\begin{array}{l} 11) \quad 2x - y = 7 \\ \quad \quad x + 3y = 7 \end{array}$$

$$\begin{array}{l} 12) \quad 8x + 3y = -5 \\ \quad \quad 10x + 6y = -13 \end{array}$$

Solve each system of equations using whichever method you prefer.

$$\begin{array}{l} 13) \quad f - 2g = -1 \\ \quad \quad 2f + 3g = -16 \end{array}$$

$$\begin{array}{l} 14) \quad 4x - 2y = 5 \\ \quad \quad 2x = y - 1 \end{array}$$

$$\begin{array}{l} 15) \quad 2x + y = 4 \\ \quad \quad 3x + 2y = 1 \end{array}$$

