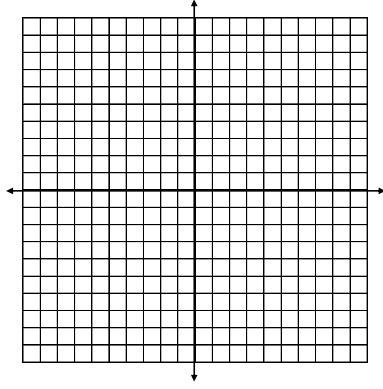


SOLVE A SYSTEM OF LINEAR EQUATIONS

GRAPHING

Solve the system of equations using the graphing method.

$$\begin{cases} y = 2x - 4 \\ y - 3 = -\frac{1}{3}x \end{cases}$$



Solution:

(,)

SUBSTITUTION

Solve the system of equations using the substitution method.

$$\begin{cases} x = y + 4 \\ 2x + 3y = -7 \end{cases}$$

Solution:

(,)

ELIMINATION

Solve the system of equations using the elimination method.

$$\begin{cases} 4x + 3y = -23 \\ 3x + y = -11 \end{cases}$$

Solution:

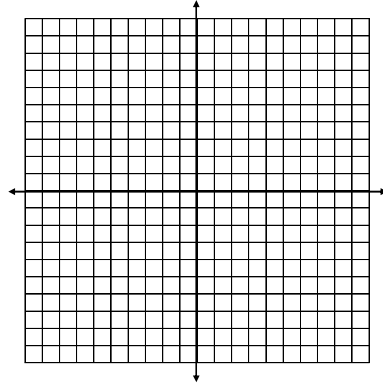
(,)

SPECIAL SYSTEMS

NO SOLUTION

Parallel Lines never intersect; therefore, there is no solution for a set of parallel lines (same slope).

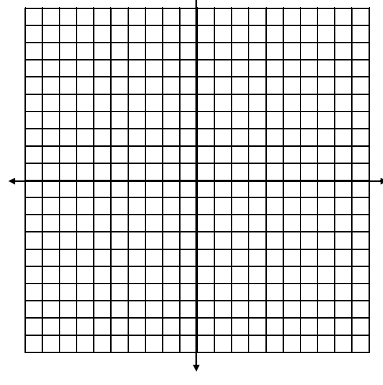
$$\begin{cases} y = 3x + 7 \\ 6x - 2y = 2 \end{cases}$$



INFINITELY MANY SOLUTIONS

Coinciding lines share all points on the line; therefore, there are infinitely many solutions for lines that are the same.

$$\begin{cases} y = \frac{1}{2}x - 5 \\ x - 2y = 10 \end{cases}$$

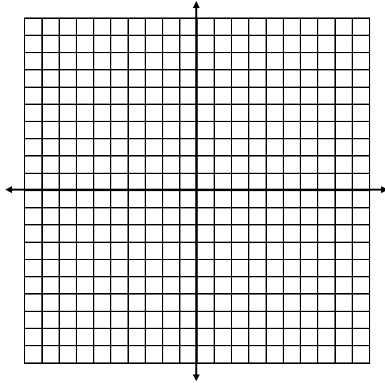


A. _____ SYSTEMS OF EQUATIONS

Review of all three methods

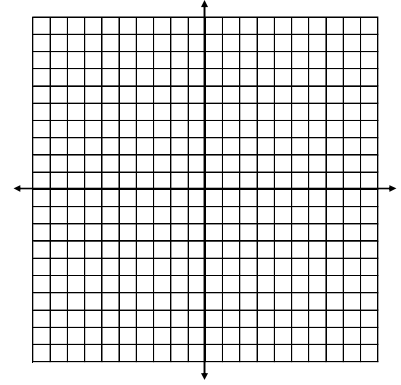
Solve each system of equations using the method suggested.

1.
$$\begin{cases} y = 3x - 1 \\ y = \frac{1}{2}x + 4 \end{cases}$$



2.
$$\begin{cases} y = 2x + 3 \\ y - 2x = 8 \end{cases}$$

GRAPHING



3.
$$\begin{cases} x = 4y - 1 \\ 2x - 3y = 13 \end{cases}$$

4.
$$\begin{cases} x + 2y = 2 \\ y - 1 = -\frac{1}{2}x \end{cases}$$

SUBSTITUTION

5.
$$\begin{cases} 3x + 2y = 8 \\ 4x - 2y = -22 \end{cases}$$

6.
$$\begin{cases} 3x + 4y = -20 \\ 2x + 2y = -8 \end{cases}$$

ELIMINATION