

Solving Systems of Equations by Substitution

Solve each system by substitution.

*Must show work!***Odds only**

Ex.

$$1) \begin{cases} y = 7x - 10 \\ y = -3 \end{cases}$$

$$2) \begin{cases} y = -8 \\ y = -2x - 12 \end{cases}$$

① Replace y with what y equals in other equation.

② Solve for x .

③ Plug in what x equals into one of the original equations.

$$\begin{array}{r} -8 = -2x - 12 \\ +12 \quad +12 \\ \hline 4 = -2x \end{array}$$

$$\begin{array}{r} 4 = -2x \\ -2 \quad -2 \\ \hline -2 = x \end{array}$$

$$4) \begin{cases} y = 9x - 9 \\ y = 9 \end{cases}$$

$$y = -2x - 12$$

$$y = -2(-2) - 12$$

$$y = 4 - 12$$

$$y = -8$$

④ Write ordered pair (x, y)

$$\boxed{-2, -8}$$

Solution

$$3) \begin{cases} y = 6x \\ y = 5x + 7 \end{cases}$$

$$5) \begin{cases} y = -4 \\ y = x - 8 \end{cases}$$

$$6) \begin{cases} y = 8x - 9 \\ y = 7 \end{cases}$$

$$7) \begin{cases} y = 6x - 14 \\ y = -8x \end{cases}$$

$$8) \begin{cases} y = 2x - 15 \\ y = 5x \end{cases}$$