

Warm Up Questions

1. $x = 3 - 2y$
 $4x + 9y = 16$

2. $-7x + 7y = 21$
 $2y = 16 + 4x$

$$1. \quad x = 3 - 2y \quad \textcircled{1}$$

$$4x + 9y = 16 \quad \textcircled{2}$$

Sub in $\textcircled{2}$

$$4x + 9y = 16$$

$$\begin{pmatrix} x & , & y \\ -5 & , & 4 \end{pmatrix}$$

$$4(3 - 2y) + 9y = 16$$

$$\textcircled{12} \quad \underline{-8y} + \underline{9y} = 16 - 12$$

$$y = 4$$

$$x = 3 - 2y$$

$$x = 3 - 2(4)$$

$$x = 3 - 8$$

$$x = -5$$

$$2. \quad \begin{array}{l} -7x + 7y = 21 \quad \textcircled{1} \\ 2y = 16 + 4x \quad \textcircled{2} \end{array}$$

②

$$\frac{2y}{2} = \frac{16}{2} + \frac{4x}{2}$$

$$y = 8 + 2x$$

Sub in ①

$$-7x + 7y = 21$$

$$-7x + 7(8 + 2x) = 21$$

$$-7x + 56 + 14x = 21 - 56$$

$$7x = -35$$

$$x = -5$$

$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} -5 \\ -2 \end{pmatrix}$

$$y = 8 + 2x$$

$$y = 8 + 2(-5)$$

$$y = 8 - 10$$

$$y = -2$$

$$2. \quad \begin{aligned} y &= -6 - 2x \\ 4x + 3y &= -2 \end{aligned}$$