

Warm up:

$$\begin{array}{r} 3a - 5b = 31 \\ - (7a - 5b = 59) \\ \hline -4a = -28 \\ \frac{-4}{-4} = \frac{-28}{-4} \\ \hline a = 7 \end{array}$$
$$\begin{array}{r} 21 - 5b = 31 \\ -21 \quad -21 \\ \hline -5b = 10 \\ \frac{-5}{-5} = \frac{10}{-5} \\ \hline b = -2 \end{array}$$

$a = 7$
 $b = -2$

HW Solutions

$$\begin{array}{r} -5 + (+17) \\ 12 \end{array}$$

$$\textcircled{9} \quad \begin{array}{r} 2k - 5p = -5 \\ - (6k - 5p = -17) \end{array}$$

$$\begin{array}{r} -4k = 12 \\ \hline -4 \quad -4 \end{array}$$

$$k = \textcircled{-3}$$

$$\begin{array}{r} -6 - 5p = -5 \\ +6 \quad +6 \\ \hline -5p = 1 \\ -5 \quad -5 \end{array}$$

$$p = -\frac{1}{5}$$

$$\begin{array}{l} k = -3 \\ p = -\frac{1}{5} \end{array}$$

⊖

$$\begin{array}{r} 4x + y = -1 \\ -(4x + 3y = -8) \\ \hline -2y = 7 \end{array}$$

$-\frac{2y}{-2} = \frac{7}{-2}$

$y = -\frac{7}{2}$

$4x - \frac{7}{2} = -1$

$4x = \frac{7}{2} - 1$

$4x = \frac{7}{2} - \frac{2}{2}$

$4x = \frac{5}{2}$

$x = \frac{5}{8}$

$x = \frac{5}{8}$
 $y = -\frac{7}{2}$

⑥

$$\begin{array}{r} \cancel{x} + y = 8 \\ - (\cancel{x} - y = 2) \\ \hline 2y = 6 \\ \hline y = 3 \end{array}$$

$y + (x + y)$

$$\begin{array}{r} x - 3 = 2 \\ + 3 \quad + 3 \\ \hline x = 5 \end{array}$$

$x = 5$
 $y = 3$

$$\begin{array}{r} \textcircled{7} \quad 2m + h = 1 \\ + (m - h = 8) \end{array}$$

$$\begin{array}{r} \hline 3m = 9 \\ \hline \frac{3m}{3} = \frac{9}{3} \\ \hline m = 3 \end{array}$$

$$\begin{array}{l} m = 3 \\ h = -5 \end{array}$$

$$\begin{array}{r} 2m + h = 1 \\ - (m - h = 8) \\ \hline m + 2h = -7 \\ \hline m = 3 \\ \hline h = -5 \end{array}$$

Showdown

$$3w - 2z = 5$$

$$w + z = 15$$

$$\begin{array}{r} -w \qquad \qquad -w \\ \hline \end{array}$$

$$z = 15 - w$$

$$15 - 7 = 8$$

$$3w - 2(15 - w) = 5$$

$$3w - 30 + 2w = 5$$

$$5w - 30 = 5$$

$$\begin{array}{r} +30 \quad +30 \\ \hline 5w = 35 \end{array}$$

$$w = 7$$

$$\begin{array}{l} w = 7 \\ z = 8 \end{array}$$

$$\begin{array}{r} a - 3b = -1 \\ + (2a + 3b = 16) \\ \hline 3a = 15 \\ \frac{3a}{3} = \frac{15}{3} \\ \hline a = 5 \end{array}$$
$$\begin{array}{r} 5 - 3b = -1 \\ -5 \quad -5 \\ \hline -3b = -6 \\ \frac{-3b}{-3} = \frac{-6}{-3} \\ \hline b = 2 \end{array}$$