

HW: Multistep Equations Worksheet

Warm up:

Solve:

$$\frac{4}{3} \left(\frac{3}{4}x - 5 \right) = \frac{4}{3}$$

$$x = 20$$

$$3) \quad -2(3 - x) = 2$$

$$-6 + 2x = 2$$

$$+6 \quad +6$$

$$2x = 8$$

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

$$2) \quad 3x - 5 = -23$$

$$+5 \quad +5$$

$$3x = -18$$

$$\frac{3x}{3} = \frac{-18}{3}$$

$$x = -6$$

4) *Simplify*

$$5x - 4x + 2x$$

$$x + 2x$$

$$3x$$

$$-2(3-x)$$

$$-6 - (-2x)$$

$$-6 + 2x$$

$$3 \left(\frac{5x - 7}{3} \right) = (-4) 3$$

$$5x - 7 = -12$$

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

$$x = -1$$

Combining Like Terms

$$\begin{array}{r}
 2x \\
 -5x \\
 8x \\
 \frac{2}{3}x \\
 \hline
 -3.97x
 \end{array}$$

$$\begin{array}{r}
 > \\
 -3 \\
 2\frac{5}{9} \\
 -0.15 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 4x^2 \\
 -8x^2 \\
 9.5x^2 \\
 -\frac{3}{4}x^2 \\
 \hline
 \end{array}$$

$$\underline{3x} - \underline{7} + \underline{5} - \underline{2x} = 12$$

$$x - 2 = 12$$

$$+ 2 \quad + 2$$

$$\underline{x = 14}$$

$$8x - 3x = 5x$$

$$6x + 8x \quad \therefore \underline{-x} + \underline{7x} - 5 + \underline{8x} = -12$$

$$14x - 5 = -12$$

$+5 \quad +5$

$$\frac{14x}{14} = \frac{-7}{14}$$

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

$$3 + 2(x + 4) = 17$$

$$\underline{3} + 2x + \underline{8} = 17$$

$$2x + 11 = 17$$

$$\begin{array}{r} 2x + 11 = 17 \\ -11 \quad -11 \\ \hline 2x = 6 \\ \frac{2}{2} \quad \frac{6}{2} \\ \hline x = 3 \end{array}$$

$$11 + 2x = 17$$

$$\begin{array}{r} 11 + 2x = 17 \\ -11 \quad -11 \\ \hline 2x = 6 \\ \frac{2}{2} \quad \frac{6}{2} \\ \hline x = 3 \end{array}$$

What if we were subtracting?

$$3 - 2(x + 4) = 17$$

$$\underline{3} - 2x - \underline{8} = 17$$

$$\begin{array}{r} -2x - 5 = 17 \\ +5 \quad +5 \end{array}$$

$$\begin{array}{r} -2x = 22 \\ \hline -2 \quad -2 \end{array}$$

$$\underline{x = -11}$$

$$5 - 2(3x - 2) = 12$$

$$\underline{5} - 6x + \underline{4} = 12$$

$$\begin{array}{r} -6x + 9 = 12 \\ -9 \quad -9 \end{array}$$

$$\begin{array}{r} -6x = 3 \\ -6 \quad -6 \end{array}$$

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

$$3 - 5(2x - 3) + 2(x + 2) = 11$$

$$\underline{3} - \underline{10x} + \underline{15} + \underline{2x} + \underline{4} = 11$$

$$\begin{array}{r} -8x + 22 = 11 \\ -22 \quad -22 \\ \hline \end{array}$$

$$\begin{array}{r} -8x = -11 \\ -8 \quad -8 \\ \hline \end{array}$$

$$x = \frac{-11}{-8}$$

HW Solutions

$$\textcircled{2} \quad \begin{array}{r} 104 = y - 67 \\ +67 \quad \quad +67 \end{array}$$

$$\underline{171 = y}$$

$$\textcircled{13} \quad -4 \left(-\frac{r}{4} \right) = \left(\frac{1}{7} \right) (-4)$$

$$r = -\frac{4}{7}$$

③

$$\frac{2}{3} + w = 1 \frac{1}{2}$$

$$-\frac{2}{3}$$

$$-\frac{2}{3}$$

$$w = \frac{5}{6}$$

$$\frac{3}{2} - \frac{2}{3}$$

$$\frac{9}{6} - \frac{4}{6} = \frac{5}{6}$$

$$\begin{aligned} \text{CP}_1 & \rightarrow \binom{n-2}{2} = \binom{2}{2} \rightarrow \text{②} \\ n-2 &= 14 \\ &+ 2 \quad + 2 \\ \hline n &= 16 \end{aligned}$$

$$\textcircled{2} \quad \begin{array}{r} 2b + 6 = 24 \\ -6 \quad -6 \\ \hline \end{array}$$

$$\cancel{3} \left(\frac{2b}{\cancel{3}} \right) = (\cancel{18}) \cancel{3}$$

$$\begin{array}{r} 2b = 54 \\ \cancel{2} \quad \cancel{2} \\ \hline b = 27 \end{array}$$

$$\cancel{2} \left(\frac{2b}{\cancel{3}} \right) = (\cancel{18}) \cancel{2}$$

$$\textcircled{b = 27}$$

$$\begin{aligned} \textcircled{2} \quad & \begin{array}{r} -6m - 8 = 24 \\ \quad \quad \quad + 8 \quad \quad + 8 \\ \hline -6m = 32 \\ \quad \quad \quad -6 \quad \quad -6 \\ \hline m = -\frac{16}{3} \end{array} \\ & -5\frac{1}{3} \end{aligned}$$

$$\begin{array}{r} \textcircled{9} \quad 2d - 175 = 755 \\ \quad \quad + 175 \quad \downarrow 175 \\ \hline 2d = 930 \\ \frac{2d}{2} = \frac{930}{2} \\ \hline d = 465 \\ \hline \textcircled{465 \text{ home runs}} \end{array}$$

$$\textcircled{31} \quad \begin{array}{r} 45 = 7 - 5n \\ -7 \quad -7 \\ \hline \end{array}$$

$$\begin{array}{r} 38 = -5n \\ -5 \quad -5 \\ \hline \end{array}$$

$$\textcircled{-\frac{38}{5} = n}$$

$$-7 \frac{3}{5}$$