

## HW Multi-Step Equations

10/11

$$\begin{array}{r}
 1.) \quad -5(2w+1) = 25 \\
 \quad -10w - 5 = 25 \\
 \quad \quad +5 \quad +5 \\
 \hline
 \quad -10w = 30 \\
 \quad \quad -10 \quad -10 \\
 \hline
 \quad w = -3
 \end{array}
 \quad \text{or} \quad
 \begin{array}{r}
 -5(2w+1) = 25 \\
 \quad \quad -5 \quad \quad -5 \\
 \hline
 \quad 2w+1 = -5 \\
 \quad \quad -1 \quad -1 \\
 \hline
 \quad 2w = -6 \\
 \quad \quad \frac{2}{2} \quad \frac{-6}{2} \\
 \hline
 \quad w = -3
 \end{array}$$

$$\begin{array}{r}
 2.) \quad -40 - 3(2x+5) = -61 \\
 \quad -40 - 6x - 15 = -61 \\
 \quad \quad -6x - 55 = -61 \\
 \quad \quad \quad +55 \quad +55 \\
 \hline
 \quad \quad -6x = -6 \\
 \quad \quad \quad -6 \quad -6 \\
 \hline
 \quad \quad x = 1
 \end{array}$$

$$\begin{array}{r}
 3.) \quad -5g - 1(8-g) = 12 \\
 \quad -5g - 8 + 1g = 12 \\
 \quad \quad -4g - 8 = 12 \\
 \quad \quad \quad +8 \quad +8 \\
 \hline
 \quad \quad -4g = 20 \\
 \quad \quad \quad -4 \quad -4 \\
 \hline
 \quad \quad g = -5
 \end{array}$$

$$\begin{array}{r}
 4.) \quad 42 = -18t + 4(t+5) \\
 \quad 42 = -18t + 4t + 20 \\
 \quad 42 = -14t + 20 \\
 \quad \quad -20 \quad -20 \\
 \hline
 \quad 22 = -14t \\
 \quad \quad -14 \quad -14 \\
 \hline
 \quad t = \frac{-11}{7} \text{ simplify} \\
 \quad \quad \quad \text{or} \quad -1\frac{4}{7}
 \end{array}$$

$$\begin{aligned} 5.) & -3(2d-8)+10d=16 \\ & -6d+24+10d=16 \\ & 4d+24=16 \\ & \underline{-24 \quad -24} \\ & 4d = -8 \\ & \frac{4}{4} \quad \frac{-8}{4} \end{aligned}$$

$$d = -2$$

$$\begin{aligned} 6.) & 2m + 0.5(m-4) = 9 \\ & 2m + 0.5m - 2 = 9 \\ & 2.5m - 2 = 9 \\ & \underline{+2 \quad +2} \\ & 2.5m = 11 \\ & \frac{2.5}{2.5} \quad \frac{11}{2.5} \end{aligned}$$

$$m = 4.4$$

$$\begin{aligned} 7.) & 5x - 12 \\ & 4x + 6 \\ & 3x + 9 \\ & \underline{12x + 3} \rightarrow \text{Perimeter} \end{aligned}$$

$$\begin{array}{lcl} 8.) & 8x+23 & x-5 \quad \text{or} \quad 2(8x+23)+2(x-5) \\ & \underline{8x+23} & \underline{x-5} & 16x+46+2x-10 \\ & 16x+46 & 2x-10 & \underline{18x+36} \end{array}$$

$$\begin{aligned} & \text{add} \\ & 16x+46 \\ & \underline{2x-10} \\ & \underline{18x+36} \rightarrow \text{perimeter} \end{aligned}$$

same