

HW Equations w/ 10/17 Variables on Both sides

$$\begin{array}{r}
 1.) \quad 8x + 12 = 5x - 36 \\
 \quad -5x \quad \quad -5x \\
 \hline
 3x + 12 = -36 \quad SA \\
 \quad -12 \quad -12 \\
 \hline
 x = -48 \\
 \quad 3 \quad \quad 3
 \end{array}$$

- steps
- 1) Subtract 5x
 - 2) Subtract 12
 - 3) Divide 3

$x = -16$

Combine like terms

$$\begin{array}{r}
 2.) \quad 7 + 2(w - 4) = 23 - 6w \\
 \quad 7 + 2w - 8 = 23 - 6w \\
 \quad 2w - 1 = 23 - 6w \\
 \quad +6w \quad \quad +6w \\
 \hline
 8w + 1 = 23 \\
 \quad +1 \quad +1 \\
 \hline
 8w = 24 \\
 \quad 8 \quad \quad 8
 \end{array}$$

- steps
- 1) Use the distributive prop.
 - 2) combine like terms
 - 3) Add 6w
 - 4) Add 1
 - 5) Divide 8

$w = 3$

$$\begin{array}{r}
 3.) \quad 5(2d - 7) = 3d + 5 + 12d \\
 \quad 10d - 35 = 15d + 5 \\
 \quad -15d \quad \quad -15d \\
 \hline
 -5d - 35 = 5 \\
 \quad +35 \quad +35 \\
 \hline
 -5d = 40 \\
 \quad -5 \quad \quad -5
 \end{array}$$

- steps
- 1) use the distributive on the left side. Combine like terms on the right side
 - 2) Subtract 15d
 - 3) Add 35
 - 4) Divide -5

$d = -8$

4.) $9 + 4(x - 3) = 6x + 5$ * remember, there's multiple ways to solve these equations

$9 + 4x - 12 = 6x + 5$

$-3 + 4x = 6x + 5$

$-6x - 6x$

$-3 - 2x = 5$

$+3 \quad +3$

$-2x = 8$

$\frac{-2}{-2} \quad \frac{8}{-2}$

$x = -4$

* 5.) $6 - (h - 9) = 3(4 - h)$

$6 - h + 9 = 12 - 3h$

$15 - h = 12 - 3h$

$+3h \quad +3h$

$15 + 2h = 12$ ds

$-15 \quad -15$

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

$h = -1\frac{1}{2} \text{ or } -1.5$

6.) $6 - 3(2x - 9) = 7(2x - 1) + 5$

$6 - 6x + 27 = 14x - 7 + 5$

$-6x + 33 = 14x - 2$

$-14x \quad -14x$

$-20x + 33 = -2$

$-33 \quad -33$

$-20x = -35$

$\frac{-20}{-20} \quad \frac{-35}{-20}$

$x = 1\frac{15}{20} \rightarrow 1\frac{3}{4} \text{ or } 1.75$

7.) Perimeter = add up all the sides


$$\begin{array}{r}
 8x+6 \\
 1x+3 \\
 \hline
 8x+6 \\
 14x-28 \\
 \hline
 31x-13
 \end{array}
 \begin{array}{r}
 9 \\
 +6 \\
 15 \\
 \hline
 15-28 \\
 -13
 \end{array}
 \begin{array}{r}
 7(2x-4) \\
 \hline
 14x-28
 \end{array}$$

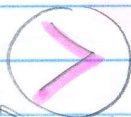
$$8.) \frac{3a - 5ba^2}{|a|} - \frac{3(-2) - 5(4)(-2)^2}{|-2|}$$

$$= \frac{-6 - 20(4)}{2}$$

$$= \frac{-6 - 80}{2} = \frac{-86}{2}$$

$$= -43$$

9.) $\frac{15}{8}$  0.8

150 $\frac{15}{18}$  $\frac{8}{10}$ 144 $\frac{4}{8}$
 $\times 8$
 144

10.) 0.14(0.3)

$\times 3$ 3 place values
 after decimal
 0.042
 answer

$$0.042$$

11.) $37 \text{ } \left(\begin{array}{l} + \\ - \end{array} \right) 45^\circ$

$$\begin{array}{r}
 37 \\
 + 45 \\
 \hline
 82^\circ
 \end{array}$$