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HW Equations w/ Variables on Both sides 10/17

1.) $8x + 12 = 5x - 36$

$-5x \quad -5x$

$3x + 12 = -36$ SA

$-12 \quad -12$

$\frac{3x}{3} = \frac{-48}{3}$

$x = -16$

Steps
1) Subtract 5x
2) Subtract 12
3) Divide 3

2.) $7 + 2(w - 4) = 23 - 6w$

Combine like terms → $7 + 2w - 8 = 23 - 6w$

$2w - 1 = 23 - 6w$

$+6w \quad +6w$

$8w - 1 = 23$

$+1 \quad +1$

$\frac{8w}{8} = \frac{24}{8}$

$w = 3$

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

3.) $5(2d - 7) = 3d + 5 + 12d$

$10d - 35 = 15d + 5$

$-15d \quad -15d$

$-5d - 35 = 5$

$+35 \quad +35$

$\frac{-5d}{-5} = \frac{40}{-5}$

$d = -8$

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

4.) $9 + 4(x - 3) = 6x + 5$

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

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

$-6x \quad -6x$

$-3 - 2x = 5$

$+3 \quad +3$

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

$x = -4$

* remember, there's multiple ways to solve these equations.

* 5.) $6 - 7(h - 9) = 3(4 - h)$

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

$15 - h = 12 - 3h$

$+3h \quad +3h$

$15 + 2h = 12$, os

$-15 \quad -15$

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

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

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

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

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

$-14x \quad -14x$

$-20x + 33 = -2$

$-33 \quad -33$

$\frac{-20x}{-20} = \frac{-35}{-20}$

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

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7.) Perimeter = add up all the sides

$8x+6$
$1x+3$ | 9
$+6$
15

$8x+6$
$14x-28$
$3|x-13$

$7(2x-4)$
$14x-28$

$15-28$
-13

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

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

$= \frac{-6-80}{2} = \frac{-68}{2}$

$= -34$

9.) $\frac{15}{8}$ ◯ 0.8

150 $\quad$ 144

$\frac{15}{18}$ ◯ $\frac{8}{10}$

bu $\quad$ bu

$\frac{4}{18}$
$\times 8$
144

10.) $0.14(0.3)$

14
$\times 3$
0.042

3 place values after decimal

answer

0.042

11.) $37° + 45°$

37
$+45$
$82°$