

Algebra: Please clear your desk except for...

1. SNB - Solve each equation.

Check only after you have solved both.

1.  $-38 = -3(x-5) - 2(x+9)$

$$-38 = -3(x) + -3(-5) + (-2)(x) + (-2)(9)$$

$$-38 = (-3x) + 15 + (-2x) + (-18)$$

$$-38 = -5x + (-3)$$

$$\begin{array}{r} +3 \\ \hline -35 = -5x \end{array} \quad \begin{array}{r} +3 \\ \hline -35 = -5x \end{array} \quad x=7$$

2.  $-14 = \frac{2}{5}(9-2b)$

$$\begin{array}{r} \times 5 \\ \hline -35 = 9 - 2b \\ +35 \quad +2b \\ \hline 2b = 44 \\ \frac{2b}{2} = \frac{44}{2} \quad b=22 \end{array}$$

$$-14 = \frac{18}{5} + (-\frac{4}{5}b)$$

$$\begin{array}{r} -\frac{18}{5} \quad -\frac{18}{5} \\ \hline (-\frac{18}{5}) - (\frac{18}{5}) = -\frac{4}{5}b (-\frac{5}{4}) \\ 22 = b \\ b=22 \end{array}$$

Sep 11-7:34 AM

1.  $-38 = -3(x-5) - 2(x+9)$

2.  $-14 = \frac{2}{5}(9-2b)$

Aug 14-4:41 PM

### Solve Equations with Variables on Both Sides

Main Idea:

1. Simplify each side of the equation first.
2. Get the variable on only one side of the equation.

Ex 1:  $9x + (-8) = 4x + 12$

$$\begin{array}{r} -4x \quad -4x \\ \hline 5x + (-8) = 12 \end{array}$$

$$5x + (-8) = 12$$

$$+ 8 \quad + 8$$

$$\hline 5x = 20$$

$$\frac{5}{5} \quad \frac{5}{5}$$

$$\boxed{x = 4}$$

check:

$$9x + (-8) = 4x + 12$$

$$9(4) + (-8) = 4(4) + 12$$

$$28 = 28$$

Oct 11-8:41 AM

Ex 2:  $13 + 3x = -6x + 4$

$$+6x \quad +6x$$

$$\begin{array}{r} 13 + 9x = 4 \\ -13 \quad -13 \\ \hline 9x = -9 \end{array}$$

$$\frac{9}{9} \quad \frac{9}{9}$$

$$\boxed{x = -1}$$

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$$\text{Ex 3: } \frac{1}{3}(15x - 24) = 8 + 4(x - 3)$$

$$5x + (-8) = 8 + 4x + (-12)$$

$$5x + (-8) = 4x + (-4)$$

$$\begin{array}{r} -4x \quad -4x \\ \hline \end{array}$$

$$x + (-8) = -4$$

$$\begin{array}{r} + 8 \quad + 8 \\ \hline \end{array}$$

$$\boxed{x = 4}$$

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$$\text{Ex 4: } 7x - 2(4 - 3x) = 2(x - 10) + 5x$$

$$7x + (-8) + 6x = 2x + (-20) + 5x$$

$$13x + (-8) = 7x + (-20)$$

$$\begin{array}{r} -7x \quad -7x \\ \hline \end{array}$$

$$6x + (-8) = -20$$

$$\begin{array}{r} + 8 \quad + 8 \\ \hline \end{array}$$

$$\frac{6x}{6} = \frac{-12}{6}$$

$$\boxed{x = -2}$$

Oct 11-9:01 AM

$$\text{Ex 5: } 3(x + (-4)) = \frac{1}{3}(6 + 9x)$$

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

$$\begin{array}{r} -3x \qquad \qquad -3x \\ \hline \end{array}$$

$$-12 = 2 \quad \text{False}$$

No real solution

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$$\text{Ex 6: } 9x + (-3)(x + 1) = 2(x + (-5)) + 4x + 7$$

$$9x + (-3x) + (-3) = 2x + (-10) + 4x + 7$$

$$6x + (-3) = 6x + (-3)$$

$$\begin{array}{r} -6x \qquad \qquad -6x \\ \hline \end{array}$$

$$-3 = -3 \quad \text{TRUE}$$

All Real #s

x is any real #

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You try

1.  $-4 - 2x = 17 + 3(x + 1)$

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

$$\begin{array}{r} -4 + (-2x) = 20 + 3x \\ + 2x \qquad \qquad + 2x \end{array}$$

$$\begin{array}{r} -4 = 20 + 5x \\ -20 \quad -20 \\ \hline -24 = 5x \end{array}$$

$$\begin{array}{r} -24 = 5x \\ \frac{-24}{5} = \frac{5x}{5} \end{array}$$

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

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

2.  $\frac{1}{3}(6x - 9) + 2 = 4x - 2(x + 1)$

$$2x + (-3) + 2 = 4x + (-2x) + (-2) \quad J. 6$$

$$2x + (-1) = 2x + (-2)$$

$$\begin{array}{r} 2x + (-1) = 2x + (-2) \\ -2x \qquad \qquad -2x \end{array}$$

$$\hline -1 = -2$$

No real solutions

first initial lastname @psdms  
pw lunch#

Aug 14-5:38 PM

1.  $-4 - 2x = 17 + 3(x + 1)$

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$$2. \frac{1}{3}(6x-9)+2=4x-2(x+1)$$

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## Assignment #10

Part I: p. 157 #3-13 odd, 22-28

Part II: p. 158 #32-43

Sep 25-7:28 AM