

On the Front Table:

- **Pick up a Homework Answer Key to share with a partner**
- **Check your answers and find your percent score**
- **Put a DOT in the box for any questions you want me to go over**

Lesson 1.2 Adding Steps

Learning Target: Solve Multi-Step Equations
Part 2 and Part 3

As Shrek Said, "Onions have layers."



"Solving Equations - Think of peeling the layers of terms, constants, and coefficients away from the variable"

To Solve a Multi-Step Equation

Order of Steps:

1st: Use the Distributive Property

2nd: Combine Like Terms

3rd: Cancel with + or -

4th: Cancel with * or \div

Part 2

Add a Step!

Order of Steps:



Combine Like Terms

Cancel with + or -

Cancel with * or \div

Learning Target: Solve Multi-Step Equations

Solve

$$8x - 6x - 25 = -35$$

$$\begin{array}{r} 2x - 25 = -35 \\ + 25 \quad + 25 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{-10}{2}$$

$$x = -5$$

1st: Combine Like Terms

2nd: Cancel with + or -

3rd: Cancel with * or

3. $-4n - 8n + 17 = 23$

$$-12n + 17 = 23$$

$$\underline{-17 \quad -17}$$

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

$$n = -0.5$$

4. $-14x + 28 + 6x = -44$

$$-8x + 28 = -44$$

$$\underline{-28 \quad -28}$$


$$\frac{-8x}{-8} = \frac{-72}{-8}$$

$$x = 9$$

Part 3

Add a Another Step!

1st: Use the Distributive Property

$$8(2n - 5) = -72$$


2nd: Combine Like Terms

3rd: Cancel with addition or subtraction

4th: Cancel with multiplication or division

Learning Target: Solve Multi-Step Equations

$$2 \cdot (1 - 5x) + 4 = -8$$

$$2 - 10x + 4 = -8$$

$$6 - 10x = -8$$

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

$$\begin{array}{r} -10x = -14 \\ \hline -10 \qquad -10 \end{array}$$

$$x = 1.4$$

Write these in your notes and solve

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

$$-3x - 6 + 5x = -9$$

$$\begin{array}{r} 2x - 6 = -9 \\ +6 \quad +6 \\ \hline \end{array}$$

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

$$x = -1.5$$

6. $5 + 1.5(2d - 1) = 0.5$

$$5 + 3d - 1.5 = 0.5$$

$$\begin{array}{r} 3.5 + 3d = 0.5 \\ -3.5 \quad -3.5 \\ \hline \end{array}$$

$$\frac{3d}{3} = \frac{-3}{3}$$

$$d = -1$$

To Solve a Multi-Step Equation

Order of Steps:

- 1st: Use the Distributive Property
- 2nd: Combine Like Terms
- 3rd: Cancel with + or \div
- 4th: Cancel with * or \cdot

Real-Life Application

Use the table to find the number of miles x you need to run on Friday so that the mean number of miles run per day is 1.5

Day	Miles
Monday	2
Tuesday	0
Wednesday	1.5
Thursday	0
Friday	x

$$1.5 + 2 + x = 7.5$$

OR

$$\frac{2 + 1.5 + x}{5} = 1.5$$

Guess & Check

Homework:

You **MUST** copy the equation from the book and show each step in your solution!

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#Don't be gettin' lazy on me now!

#your hand will not fall off if you copy the problem down.

#don't forget you use a pencil because it has an eraser.

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