Lesson 3.1 Solving Linear Equations with one Variable (Day 6)

Math Warm Up

Monday	My Thinking	Correct/Compare
14,01,00	[1] [[IIIIKIII]	Correct Collibate
Monday $\frac{2x - 1}{3} + \frac{x + 4}{4} = \frac{3}{2}$		
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Lesson 3.1 Solving Linear Equations with one Variable (Day 5c)

Math Warm Up

Monday
$$\frac{2x-1}{3} + \frac{x+4}{4} = \frac{3}{2}$$

$$X = \frac{10}{11}$$

Lesson 3.1 Solving Linear Equations with one Variable (Day 5)

Objective

TSW solve linear equations with one variable by simplifying expressions using distributive property, laws of equality, combining like terms and moving all the variables to one side of the equal sign.



Linear equations
can be used to solve
mathematical and realworld problems. A linear
equation with one variable
can have one solution, no
solution, or infinitely many
solutions.

Common Core State Standards 8.EE.7 Solve linear equations with one variable

8EE 7 Solve linear equations in one variable.

8EE 7a Give examples of linear equations in one variable with one solution, infinity many solutions, or no solutions 8EE 7b Solve linear equations with rational number coefficients

 Mathematical Practices 1 Solve problems/persevere 2 Reason 4 Model Mathematics 7 Look for and use structure

Guided Practice 1

$$8 - 3(x + 2) = 2(4 - 3x) - 4.5$$

- *Move variable to ONE side of the equal sign -most often you will add or subtract the variables
- *Use distributive property
- multiply whatever is on the outside of the parenthesis with the inside of the parenthesis
 negative times negative = positive

*Combine like terms

- all the Variable together
- all numbers together

*Use laws of equality

-use the inverse operation to add, subtract, multiply, and divide on both sides of the equal sign

Guided Practice 1

$$8 - 3(x + 2) = 2(4 - 3x) - 4.5$$

$$8 - 3x - 6 = 8 - 6x - 4.5$$

$$2 - 3x = 3.5 - 6x$$

$$2 - 3x + 6x = 3.5 - 6x + 6x$$

$$2 + 3x = 3.5$$

$$2 + 3x - 2 = 3.5 - 2$$

$$3x = 1.5$$

$$\frac{3x}{3} = \frac{1.5}{3}$$

$$x = 0.5$$

*Move variable to ONE side of the equal sign -most often you will add or subtract the variables

*Use distributive property

multiply whatever is on the outside of the parenthesis with the inside of the parenthesis
 negative times negative = positive

*Combine like terms

- all the variable together
- all numbers together

*Use laws of equality

-use the inverse operation to add, subtract, multiply, and divide on both sides of the equal sign We Do:

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

*Move variable to ONE side of the equal sign -most often you will add or subtract the variables

*Use distributive property

multiply whatever is on the outside of the parenthesis with the inside of the parenthesis
 negative times negative = positive

*Combine like terms

- all the variable together
- all numbers together

*Use laws of equality

-use the inverse operation to add, subtract, multiply, and divide on both sides of the equal sign

We Do:

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

 $2x + 3x - 12 = 8x + 12$
 $5x - 12 - 8x = 8x + 12 - 8x$
 $-3x - 12 = 12$
 $-3x - 12 + 12 = 12 + 12$

-3x = 24

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

x = -8

*Move variable to ONE side of the equal sign -most often you will add or subtract the variables

*Use distributive property

- multiply whatever is on the outside of the parenthesis with the inside of the parenthesis
- negative times negative = positive

*Combine like terms

- all the Variable together
- all numbers together

*Use laws of equality

-use the inverse operation to add, subtract, multiply, and divide on both sides of the equal sign

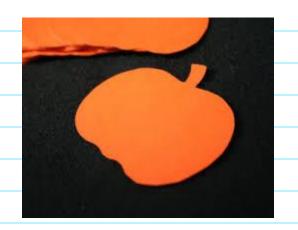
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Independent Practice #1-3



$$\frac{5(x+2)}{3} - \frac{x-1}{3} = 1$$

Challenge- Solve created equation/
"Pick a pumpkin"



-Create Word-toons

Lesson Check —#3 Solve linear equation with one variable

Course 3