Lesson 3.1 Solving Linear Equations with one Variable (Day 3)

Math Warm Up

Write the problem AND answers in the table below.

Monday	My Thinking	Correct/Compare
Subtract three from any number		
Divide two by any number		

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Math Warm Up

Write the problem AND answers in the table below.

Monday	My Thinking	Correct/Compare
Subtract three from any number		$x - 3$
Divide two by any number		$\dfrac{2}{x}$

Lesson 3.1 Solving Linear Equations with one Variable (Day 3)

Objective

TSW solve linear equations with one variable by adding, subtracting, multiplying and dividing on both sides of the equal sign.

Linear equations can be used to solve mathematical and real-world 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*

Lesson 3.1 Solving Linear Equations with one Variable

Solve for X

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

You were able to create equations by adding, subtracting, multiplying and dividing on BOTH sides of equal sign.

Then, you checked your work through substitution.

Today, you are going to solve for X

Solve for X	Questions to ask yourself....
$$\frac{2(x+3)-5}{3} = 5$$	*What operation is furthest away from the variable? *What is the inverse operations? (opposite) *Did I add, subtract, multiply on BOTH sides of the equation?

Lesson 3.1 Solving Linear Equations with one Variable

Substitute the value of
X to see if correct

Equation

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

X=

Check:

WE Do

Solve for X

$$\frac{2(x+6) - 13}{5} = 10$$

*What operation is furthest away from the variable?

*What is the inverse operations? (opposite)

*Did I add, subtract, multiply on BOTH sides of the equation?

Lesson 3.1 Solving Linear Equations with one Variable

Substitute the value of X to see if correct

Equation

$$\frac{2(x+6)-13}{5} = 10$$

X=

Check:

Solve for X	Questions to ask yourself....

$$\frac{2(x+25)-15}{9} = 5$$

*What operation is furthest away from the variable?

*What is the inverse operations? (opposite)

*Did I add, subtract, multiply on BOTH sides of the equation?

Lesson 3.1 Solving Linear Equations with one Variable (Day 3)

Independent Practice #1 & 2   Challenge- Solve created equation

Independent Practice #1&2

Solve for X	Equation
$\dfrac{2(x+2)-32}{2} = 35$	$\dfrac{2(x+2)-32}{2} = 35$
	x=
	Check

Homework

Monday Homework Order of Operation

#1-5 Part a-d

Order of Operations:
1. Complete operations within parentheses.
2. Multiply and divide from left to right.
3. Add and subtract from left to right.

PRACTICE

Simplify.

	a	b	c	d
1.	$3 \times (4 + 6) =$	$(18 - 4) \div 2 =$	$(11 - 7) \times {}^-5 =$	$56 \div (3 + 4) =$
	$3 \times 10 = 30$			
2.	$14 \div 16 \div 4 =$	$20 - 2 \times 9 =$	$15 \div 1 \times 6 =$	${}^-17 - 15 \div 5 =$
3.	$5 \times (12 - 5) =$	$36 \div (3 + {}^-6) =$	$(8 + 7) \times 2 =$	$(24 - 12) \div 3 =$
4.	$36 - 4 \times 7 =$	$13 + 42 \div 6 =$	$30 - 20 \div 10 =$	$3 + 9 \times 3 =$
5.	$5 \times 4 \div 2 =$	$20 \div (2 \times 5) =$	$(20 \div 2) \times {}^-5 =$	$(29 - 7) \div 2 =$

Course 3

Lesson Check –#2 Solve linear equation with one variable