Jan. 16
Periods 1,2,4,6

Warm Up- FSA Practice #s 7-8

Check Homework - pg. 39 #s 1-10

Class Work -
- Notes
- Introduce Two-Step equations,
  - MathAntics video
- Practice Sheet 11.1

Homework - study for 11.1 quiz tomorrow

Class Notes Jan. 16

Solving One-step Equations with Multiplication and Division:

Example 1:

$4X = 20$

4X is the same thing as 4 times X.

To find the value of one X, we need to "undo" the multiplication of 4X. The opposite of multiplication is division. So, in this example we need to divide both sides by the coefficient 4.

$$\frac{4X}{4} = \frac{20}{4}$$

So, X = 5.

To check, we substitute the value we found for X back into the original equation. 4 (5) = 20 true

Solving One-Step Equations with Multiplication and Division

Example 2:

$$\frac{X}{3} = 6$$

The variable X is being divided by 3. The opposite of division is multiplication, so we multiply both sides by 3.

$$(3)\ \frac{X}{3} = 6\ (3)$$

$$\frac{3X}{3} = 18$$

$$X = 18$$

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

$1x = -9$

$x = -9$

(-) (-)
(+) (+)

For Multiplication and Division: When the signs are the same, the answer is positive.

(-) (+)
(+) (-)

When the signs are different, the answer is negative.

3) $\frac{x}{3} = -10$

$(3)\frac{x}{3} = -10(3)$ → $x = -30$

Determing the sign when multiplying and dividing using Integers

2) $\frac{-5x}{-5} = \frac{-40}{-5}$

$x = 8$

4) $\frac{x}{-12} = -5$

$(-12)\frac{x}{-12} = -5(-12)$

$x = 60$

5) $\frac{-16x}{-16} = \frac{32}{-16}$

$x = -2$

6) $\frac{x}{-2} = 36$

$(-2)\frac{x}{-2} = 36(-2)$

$x = -72$

7) $\frac{7x}{7} = \frac{490}{7}$

$x = 70$

8) $\frac{-x}{4} = 25$

$(4)\frac{-x}{4} = 25(4)$

$-x = 100$

$(-1)-x = 100(-1)$

$x = -100$

9) $\frac{x}{200} = 3$

$\frac{200x}{200} = 600$

$x = 600$

10) $\frac{15x}{15} = \frac{-15}{15}$

$x = -1$