

Math 7H - Unit 2b

Day 3 - Multiply & Divide One-Step Equations Review

Lesson Objectives:

- I can solve one-step equations by multiplying.
- I can solve one-step equations by dividing.
- I know how to show work when solving equations.

Division Property of Equality You can divide the same number to both sides of an equation, and the statement will remain true.
 $3 = 3 \rightarrow 3/2 = 3/2$ $a = b \rightarrow a/c = b/c$ and $c \neq 0$

Division Prop (=)

Multiplication Property of Equality You can multiply the same number to both sides of an equation, and the statement will remain true.

$$3 = 3 \rightarrow 3 \times 2 = 3 \times 2 \quad a = b \rightarrow a \times c = b \times c$$

Multiplication Prop(=)

Coefficient: A number placed before and multiplied to a variable in an algebraic expression.

$$2x + 8 = 12$$

(2 is the coefficient because it is being multiplied to the x or variable in the equation.)

Remember
If you **DON'T** show work
you **DON'T** get credit!!!

Model each equation on your algebra mat. Then sketch a picture in your notes.

$4x = 12$

What is the inverse operation for this equation?

$$\frac{4x}{4} = \frac{12}{4}$$

$x = 3$ Division Prop. (=)

Don't forget to check your work!

Model each equation on your algebra mat. Then sketch a picture in your notes.

$-3x = 15$

What is the inverse operation for this equation?

$$\frac{-3x}{-3} = \frac{15}{-3}$$

$x = -5$ Division Prop. (=)

Don't forget to check your work!

Steps for Solving Equations

Step #1 Get rid of the constant

(We do this by adding or subtracting)

Step #2 Get rid of the coefficient

(We do this by multiplying or dividing)

1. $\frac{5p}{5} = 10$ Division Prop (=) $p = 2$

2. $\frac{-18}{3} = \frac{1}{3}y$ Division Prop (=) $-6 = y$

5. $\frac{5p}{5} = 10 \cdot 5$ Multiplication Prop (=) $p = 50$

6. $3 \cdot 13 = \frac{y \cdot 3}{3}$ Multiplication Prop (=) $-39 = y$

3. $\frac{8y}{8} = -72$ Division Prop (=) $y = -9$

4. $\frac{-40}{5} = \frac{1}{5}k$ Division Prop (=) $-8 = k$

7. $\frac{-c}{-8} = 7 \cdot -8$ Multiplication Prop (=) $c = -56$

8. $\frac{-4}{-5} = \frac{k \cdot -5}{-5}$ Multiplication Prop (=) $20 = k$

Homework

2.5 pg 80 #1-12, 14-16, 24, 26, 41-45

* Individual Think Time *



What to do if you get stuck...

1. Reread the problem. Did you write it down correctly?
2. Reread your notes. Is there a problem similar that we did together in class?
3. Find a problem similar in your book. Try this one to see if it helps.
4. Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

