

## Math 7H - Unit 2b

~~Day 1 - Add & Subtract One-Step Equations Review~~  
~~Day 4 - Multiply & Divide One-Step Equations with Rational Numbers~~

### Lesson Objectives:

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

### Steps for Solving Equations

- Step #1 Get rid of the constant  
 Step #2 Get rid of the coefficient

Question: What happens if the **coefficient** is a fraction or decimal? Nothing new. It's the same process!  
Click above.

Solve each equation. Be sure to show ALL work.

1.  $-0.5a = 20$  Division Prop (=)  $a = -40$

2.  $\frac{n}{1.6} = -5$  Multiplication Prop (=)  $n = -8$

3.  $5.2 = \frac{b}{-0.13}$  Multiplication Prop (=)  $-0.676 = b$

4.  $-14.4 = -0.6p$  Division Prop (=)  $24 = p$

Solve each equation. Be sure to show ALL work.

5.  $\frac{c}{3} = \frac{4}{5}$  Multiplication Prop (=)  $c = \frac{12}{5}$

6.  $\frac{2}{7} = \frac{6d}{6}$  Division Prop (=)  $\frac{2}{7} = d$

7.  $-\frac{3}{4} = -5d$  Division Prop (=)  $\frac{3}{20} = d$

8.  $\frac{c}{2} = -\frac{6}{5}$  Multiplication Prop (=)  $c = -\frac{12}{5}$

How would you solve  $\frac{2x}{3} = 6$ ?

Method 1: Undo the Division, Undo the Multiplication

$\frac{2x}{3} = 6 \rightarrow 3 \cdot \frac{2x}{3} = 6 \cdot 3 \rightarrow 2x = 18 \rightarrow x = 9$

Method 2: Multiply by the reciprocal. **EASIEST!!**

$\frac{2x}{3} = 6 \rightarrow \frac{2}{3}x = 6 \rightarrow \frac{3}{2} \cdot \frac{2}{3}x = 6 \cdot \frac{3}{2} \rightarrow x = 9$

Method 3: Divide by the coefficient. **YUCK!!!**

$\frac{2x}{3} = 6 \rightarrow \frac{2}{3}x = 6 \rightarrow x = 6 \div \frac{2}{3} \rightarrow x = 6 \cdot \frac{3}{2} \rightarrow x = 9$

Solve each equation. Be sure to show ALL work.

9.  $\frac{2f}{7} = -10.7$  Multiplication Prop (=)  $f = -37.45$

10.  $\frac{2e}{3} = \frac{4}{5}$  Multiplication Prop (=)  $e = \frac{6}{5}$

## Homework

Record & Practice Journal pg. 45-48

\* 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...

