Baby Math God (getting *x* alone)

This is a concept that the students are familiar with but hasn't been applied in this way yet. This is basically just the last step of math god. **New math rule: if a letter is on the bottom, you must first kill the letter, and then get it alone once its on top.**

Sample problem: $\frac{3}{8}=\frac{6x}{4}$ Ask students who is bothering *x*. They should answer 6 and 4. Then prompt, "Think of a war game: how would we kill a letter on the top?" Someone should answer to put it on the bottom and then remind students that to keep the world in balance, what we do to one side of the wall we have to do to the other side. Do that with everything bothering *x* until *x* is alone. Then just do a war game to simplify.

Practice Baby Math God Problems:

- $\frac{54}{48}=\frac{81x}{36}$
- $\frac{28}{32}=\frac{63}{72x}$

Dimensional Analysis

Used to convert between units

Memorize these conversions:

- 12 inches = 1 foot
- 3 feet = 1 yard
- 5,280 feet = 1 mile *It's helpful to memorize this tree
- 60 seconds = 1 minute
- 60 minutes = 1 hour
- 24 hours = 1 day
- 365 days = 1 year * This one too
- 16 ounces = 1 pound
- 2000 pounds = 1 ton

Sample Problem: Amanda drives at 88 miles per hour. How many feet per second is she going?

Set up problem as a fraction. $\frac{88 \text{ miles}}{1 \text{ hour}}$ We want our final to have feet on the top and seconds on the bottom. We will use the conversions to kill the words we don't need working our way towards the words we do need.

$$\frac{88 \text{ miles} \bullet 5280 \text{ feet} \bullet 1 \text{ hour} \bullet 1 \text{ minute}}{1 \text{ hour} \bullet 1 \text{ miles} \bullet 60 \text{ minutes} \bullet 60 \text{ seconds}}$$

Remember that the rules of a war game is that ANY thing that is the same on the top and bottom can kill each other so that means that even the words can die in a war game. Kill all the words and then do trees on the numbers to do a war game. The final answer would be $\frac{1936 \text{ feet}}{15 \text{ seconds}}$

Practice Dimensional Analysis Problems:

- Let's go mining for gold! We get lucky and are finding gold at a rate of 3 ounces every 4 hours. How many tons will we find in one year?
- An ant can run 10 feet in 4 seconds. How fast is that in miles per hour?
- Convert 32,000 ounces into tons