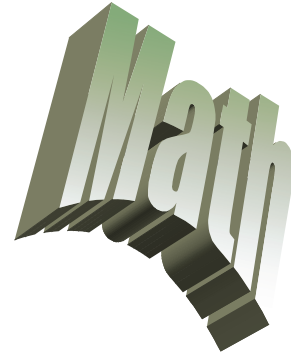


Algebra/Geometry Institute Summer 2005



Equivalent Fractions

Faculty Name: Donna Thompson

School: Solomon Middle School

Grade Level: 8th

1 Teaching objective(s)

Students will explain and explore relationships of fractions.

2 Instructional Activities

The students will start with a bell ringer activity. (3-5 minutes). Bell ringer is at the bottom of this section. It will be a review of terms related to fractions. I will then pass out worksheet #1 along with a napkin and candy bar to each student. They will proceed through the worksheet independently. (35 minutes). When the students make it to number 3, I will explain how to do the 1st one in that set (a diagram is drawn at the bottom of this section for you). The denominator in $\frac{1}{2}$ is two so you take two pieces of candy and align them at the top. Next you evenly place all the other pieces under these two headings. Now the numerator in $\frac{1}{2}$ is 1 so you look at one side only and count those pieces. The total is 6. Therefore the answer is $x = 6$. I would have the students draw the columns on scratch paper so you will know that they actually modeled the problems. After the students finish the worksheet, I would make up a few on the board for homework (these problems are listed at the bottom of this section) that involve numbers as denominators that they would not be able to model with the candy bar. Last, but not least let them eat the candy bar and then wipe their hands.

Bell Ringer

Define the following.

1. Numerator

2. Denominator

3. Fraction

4. Equivalent

Homework

Solve for x.

1. $\frac{3}{8} = \frac{x}{12}$

2. $\frac{4}{5} = \frac{x}{12}$

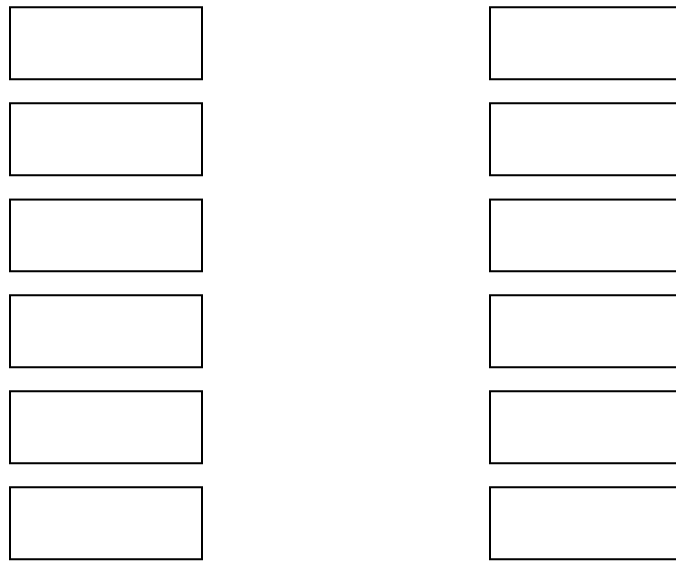
3. $\frac{8}{x} = \frac{4}{12}$

4. $\frac{x}{7} = \frac{3}{2}$

Diagram of #3a from Worksheet #1

3a. $\frac{1}{2} = \frac{x}{12}$

The denominator was two so you put two pieces of candy down 1st. Then you align all the other pieces under these two headings. This is the model you obtain. The numerator in $\frac{1}{2}$ is 1 so I would have the students circle 1 column. Next, count the pieces in that circled column and that is your new numerator to place over 12 because you had 12 pieces.



3 **Materials and Resources**

Paper

Pencil

Hershey's candy bar

Napkins

Baby wipes

Worksheet #1 (adapted from 2001 Delta RSI summer institute)

4 **Assessment**

Observation

Worksheet will be graded.

Concept will be on the unit test.

D. $\frac{1}{4} =$

E. $\frac{2}{3} =$

F. $\frac{3}{4} =$

G. $\frac{5}{6} =$

H. $\frac{2}{6} =$

I. $\frac{4}{6} =$

4. Look at your problems and develop a way to write equivalent fractions without using a model.

5. Explain how to solve $\frac{1}{8} = \frac{x}{3}$.