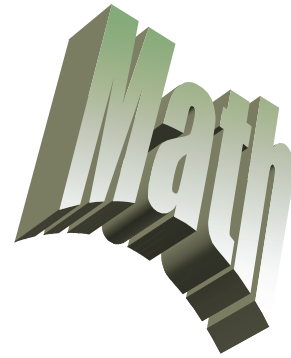


Algebra/Geometry Institute Summer 2005

Lesson Plan 1: Comparing Fractions

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School: Carver Upper Elementary School
Indianola, MS
Grade Level: 5th Grade



1. Teaching objective(s): The student will be able to compare fraction numbers using drawings.

2. Instructional Activities:

a. Give each student a set of fraction circles or fraction tiles and allow the student to manipulate them. You may allow approximately five minutes for manipulation.

Note: It is best for the student to identify the whole before beginning. It is recommended that you allow the student to stack the matching fraction parts that are comparable with the whole.

b. **Say:** In this lesson we will compare fractions using drawings.

Ask: What do we do when we compare things? What does it mean to compare fractions? (pause for discussion)

Ask: What are the symbols of comparison used in math when we compare things? (pause for discussion and allow a student to demonstrate by writing the symbols on the chalkboard or overhead projector).

c. **Teacher gives demonstrations using fraction circles or fraction tiles.**

Say: I am going to demonstrate comparing fractions using fraction circles (tiles).

Teacher demonstrates comparing $\frac{5}{6}$ and $\frac{3}{4}$ using fraction circles or (tiles).

Ask: Which is the largest $\frac{5}{6}$ or $\frac{3}{4}$?

Write the correct answer on the overhead projector, $\frac{5}{6} > \frac{3}{4}$.

Teacher demonstrates comparing $\frac{2}{4}$ and $\frac{5}{8}$ using fraction circles or (tiles).

Ask: Which is the largest $\frac{2}{4}$ or $\frac{5}{8}$?

Write the correct answer on the overhead projector, $\frac{2}{4} < \frac{5}{8}$.

Teacher demonstrates comparing other fractions using fraction circles or (tiles).

Ask: Which is the largest $\frac{3}{4}$ or $\frac{2}{4}$?

Write the correct response, $\frac{3}{4} > \frac{2}{4}$.

Ask: Which is the largest $\frac{6}{12}$ or $\frac{1}{2}$?

Write the correct response, $\frac{6}{12} = \frac{1}{2}$.

Allow students to discuss the fact that $\frac{6}{12}$ is equivalent to $\frac{1}{2}$.

Teacher may demonstrate other examples if students display confusion in understanding what has been demonstrated.

d. **Teacher allows students to practice comparing fractions using fraction circles or (tiles).**

Say: Compare $\frac{2}{5}$ and $\frac{7}{8}$, $\frac{1}{2}$ and $\frac{6}{12}$, $\frac{5}{6}$ and $\frac{3}{4}$, and $\frac{3}{4}$ and $\frac{3}{8}$. Pause after each set of fractions to allow student to compare the fractions and come to the overhead projector to share his/her result using randomly selection of students.

e. The teacher demonstrates examples of comparison by using picture drawings and the comparison signs, $<$, $>$, or $=$. Teacher will draw and shade in the given examples:

Say: Each drawing that you do must be the same size and shape.

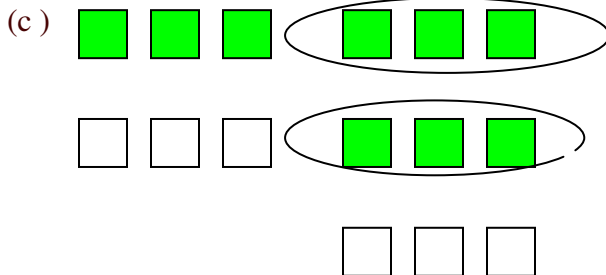
(a) $\frac{1}{4} < \frac{1}{2}$



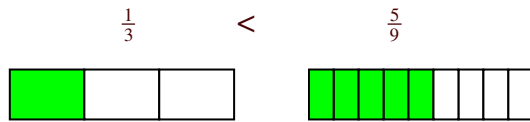
(b) $\frac{1}{2} > \frac{1}{3}$



$\frac{3}{6} < \frac{2}{3}$



- f. **Say:** Now it's your time to try drawing to compare two fractions. The teacher allows the student to draw and shade in the following examples and discusses his/her solution. The student is to use the appropriate mathematical sign of comparison.



Teacher assigns another problem for the student to complete.

$$\frac{1}{2} \text{ and } \frac{3}{4}$$

- 3 **Materials and Resources**
Overhead projector/chalkboard
Paper
Pencil
Worksheet
Fraction tiles/fraction circles

- 4 **Assessment**
(1) oral observation
(2) class participation
(2) Student will be given a worksheet containing a set of four problems to compare. This will be graded as a daily assignment.

Reference(s):

Ideas adapted from Mathematics Today 2nd Edition, Harcourt Brace Jovanovich, 1985

Name _____ Date _____

Comparing Fractions Worksheet

Directions: Compare each pair of fractions by first drawing pictures to represent each fraction. Use the appropriate (correct) mathematical symbol of comparison. Note: when drawing pictures of any fractions, each drawing must be the same size and shape.

(a) $\frac{1}{2}$ and $\frac{2}{3}$

(b) $\frac{1}{2}$ and $\frac{2}{4}$

(c) $\frac{2}{5}$ and $\frac{4}{10}$

(d) $\frac{3}{4}$ and $\frac{5}{8}$