

COMPARING FRACTIONS

Reasons For Learning Fractions

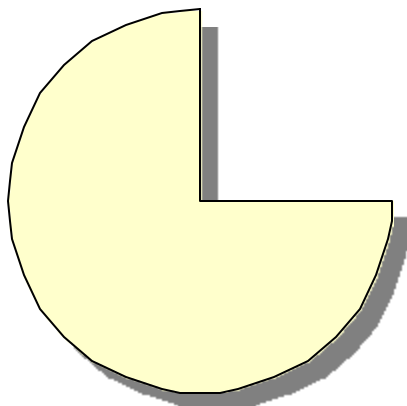
Why are fractions important? Can you think of ways fractions are used in everyday life?

Money
Time
Cooking
Land

Looking At Common Misconceptions

Bring up some of the mistakes found during last test.

- 1) *Circles* – A common misconception was to not divide the circle into an even amount of parts. (i.e. Is this circle cut up into thirds?)



Have students discuss what is wrong with this picture and then use overhead to show them how to divide a circle into different fractions using the fraction circle manipulatives.

Have them use fraction circles to COMPARE $\frac{3}{8}$ AND $\frac{5}{16}$ and to COMPARE $\frac{2}{3}$ AND $\frac{4}{6}$.

2) *Comparing Fractions*

Some students wanted to say that $\frac{4}{5}$ is larger than $\frac{7}{10}$ because the difference between the numerator and denominator is less than the difference of the second fraction. Ask why this method is not appropriate (can use the counterexample of demonstrating this does not work in the case of $\frac{1}{3}$ in comparison to $\frac{6}{9}$). Show students how to compare fractions by first reducing to lowest terms.

Examples will be to COMPARE $\frac{5}{8}$ TO $\frac{12}{16}$ and to COMPARE $\frac{6}{9}$ TO $\frac{4}{12}$.

3) *Comparing unlike denominators*

Students did not use the strategy of finding a common denominator to compare fractions. We will give the example of COMPARE $\frac{1}{3}$ TO $\frac{1}{4}$. We will show students how to compare these two fractions by first finding the least common denominator.

The next examples will be to COMPARE $2/3$ TO $3/5$ and to COMPARE $4/5$ TO $6/7$.
Talk about whether these fractions are equivalent and how to be able to tell using LCD's.

4) *Comparing Decimals*

While going over the test results, it was a common mistake for students to ignore the decimal point and then compare the resulting values. For example, students placed numbers in the following ascending order, .6, .8, .55, .125, .875 (They made the error of thinking 6 is smaller than 8 is smaller than 55 is smaller than 125 is smaller than 875 and not paying attention to place value.)

We will ask them to pay attention to place value and to COMPARE 0.60 TO 0.8
We will bring up concept of using a number line to order these numbers if they do not bring it up first. We will have them draw a number line and COMPARE 0.375 TO 0.5
and COMPARE 0.415 TO 0.25

5) *Fractions to Decimals*

We will build on the concept of decimals, place value and number line by asking them to COMPARE $3/4$ TO $4/5$ by first converting them both into decimals, then comparing them by using a number line if necessary.

Next we will ask them to COMPARE $3/8$ TO $3/7$ and to COMPARE $2/5$ TO $1/3$

Issue Practice Problems

Talk about the different strategies used to compare problems

Play Fraction War Card Game

Break Students Up Into Groups Of Four

Talk about strategies used to determine who was right and who was wrong.

Closure

Highlight Four different Strategies to compare Fractions

Circles

Reducing fractions

Least common Multiple

Convert to Decimals and use a number line

Which method proved to be the most effective and why?

Why are fractions important?

Do you feel like after today, you have a better understanding of fractions?

Why? How? Please explain?