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RNP Lesson – Fraction Operations and Initial Decimal Ideas

**Standards:**

3.1.3.2Understand that the size of a fractional part is relative to the size of the whole.

**Objectives:**

Students review how to model fractions with fraction circles by ordering unit fractions, using 1-half as a benchmark to order two fractions, and comparing fractions close to one.

**Launch:**

When I was baking for Thanksgiving dinner last week, I ran out of clean measuring cups. I needed a three-fourths cup of flour. After digging around in my kitchen drawer I found a cup that said two-thirds and I used it with some adjustment. Did I add or reduce the amount of flour in the measuring cup? Remember, I needed three-fourths but used a two-thirds cup. Ponder on that and we will come back to it.

**Explore:**

Divide students by rows and have them order these fractions from smallest to largest: ¾, 1/10, 14/15, 3/5, 5/12. Have them share their answers on the board in whatever visual way they want. Remind them to be prepared to explain their thinking.

Questions to guide discussion:

 • Which is bigger ¾ or 4/5 ?

• Which fraction is just under 1/2 ?

• Which fractions are just greater than 1/2 ?

Teaching Actions Comments

• Which fractions are close to one whole?

• Why is 1/10 the smallest?

Divide students into groups of one, two, three, four, five, six, seven (and eight if there are enough).

Have groups spread out around the room’s perimeter. Ask each group to show their whole number, their half, etc..;

Compare and contrast each group’s half to another groups half. How many “pieces” or people are in each half, quarter, thirds, etc..

Have them determine and show which fraction in their group is closest to the whole?

**Summarize:**

It is easier to judge the relative size of a fraction if you think of the numbers as pieces, with the part over the whole/total.

Using ½ as a benchmark is helpful. Thinking about how close a fraction is to one whole is also helpful when comparing fractions like ¾ and 4/5 and 99/100.

So. . .back to my baking question. . . did I add or reduce the amount of flour using my 2/3 measuring cup for ¾’s? Which one is bigger? Can two of the groups show me?

**Apply:**

Besides in math and baking, can anyone tell me where else it is helpful to know your fraction sizes? Possible answers: dividing pizza, measuring with a ruler/carpentry. When you go home tonight, find one other way than baking to use fractions and we will share them in class tomorrow . . . let’s see if we can get 32/32 responses.

Resources:

http://www.cehd.umn.edu/ci/rationalnumberproject/RNP2/Lesson01.pdf