Comparing and Ordering Fractions Activities

Supplies: Class set of Page 6 sorting boards for students to use in pairs

Class set of Page 5 fractions for students to use in pairs (Give each pair one column strip to cut apart and sort.)

Index cards, one per pair

Objective: Students will use benchmark fractions to compare positive fractions.

Standards: Grade 6 NS 1.0 Students compare and order positive and negative fractions, decimals and mixed numbers.

6.NS.7.b Write, interpret, and explain statements of order for rational numbers in real-world contexts.

Introduction Activity

I Do (Note-taking): Three methods for comparing fractions:

Method 1: Common Denominators

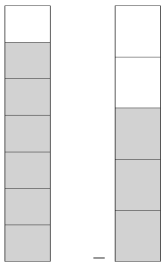
$$\frac{6}{7} \; ? \; \frac{3}{5}$$

$$\frac{5}{5} \bullet \frac{6}{7} \; ? \; \frac{3}{5} \bullet \frac{7}{7}$$

$$\frac{30}{35} > \frac{21}{35}$$

Method 2: Bar Models

$$\frac{6}{7} > \frac{3}{5}$$



Method 3: Benchmark Fractions $\frac{6}{7} \; ? \; \frac{3}{5}$

Close to 0

Close to $\frac{1}{2}$

$\frac{3}{5}$

Close to

$\frac{6}{7}$

– is a little more than one half and $\frac{6}{7}$ is almost one, $\therefore$ $\frac{6}{7}$ $\frac{3}{5}$

We Do (Note-taking): Order from least to greatest: $\frac{10}{7}, \frac{4}{5}, \frac{2}{9}, \frac{7}{15}$

Method 1: Common Denominators

— • — = ——

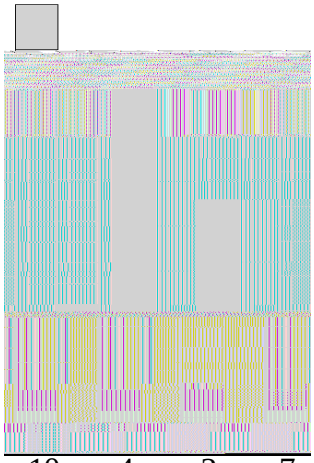
$\frac{4}{5} \bullet \frac{63}{63} = \frac{252}{315}$

$\frac{2}{9} \quad \frac{35}{35} = \frac{70}{315}$

$\frac{7}{15} \bullet \frac{21}{21} = \frac{147}{315}$

$\frac{70}{315} \quad \frac{147}{315} \quad \frac{252}{315} < \frac{450}{315}$

Method 2: Bar Models



$\frac{10}{7} \quad \frac{4}{5} \quad \frac{2}{9} \quad \frac{7}{15}$

$\frac{2}{9} < \frac{7}{15} < \frac{4}{5} < \frac{10}{7}$

Method 3: Benchmark Fractions

"The first fraction, —, is bigger than one, so we can put it to the right of the Close to 1 section."

"$\frac{4}{5}$ is only $\frac{1}{5}$ away from 1, so which category should we use?" [Close to 1]

"Where should we put $\frac{2}{9}$?" [Close to 0] "Why?" [It's only 2 out of 9 parts, or other responses]

"Where should we put $\frac{7}{15}$?" [Close to $\frac{1}{2}$] "Why?" [$\frac{7}{15}$ is close to $\frac{7}{14}$, which is $-$]

Close to 0 | Close to $\frac{1}{2}$ | Close to

$-$ | $\frac{7}{15}$ | $\frac{4}{5}$ | $\frac{10}{7}$

$\frac{2}{9} < \frac{7}{15} < \frac{4}{5} < \frac{10}{7}$

You Do (Partner Activity): You and your partner will now use a sorting board to categorize your fraction cards by benchmarks, Close to 0, Close to $-$