AR Remediation Plan – Rational Numbers Compare and Order

**Compare Fraction Strategies**

**STRAND: Number and Number Sense**

**STRAND CONCEPT: Rational Numbers Compare and Order**

**SOL: 4.2a**

**Remediation Plan Summary**

Students use fraction manipulatives to help build strategies for comparing fractions.

**Common Errors and Misconceptions**

- Some students think the fraction with the larger denominator is always the largest fraction.
- Some students can verbally say which fraction is largest but confuse the greater and less than symbol.
- Some students believe you cannot take half of an odd number.

**Materials**

Fraction manipulatives, Would You Rather Introductory Activity handout, Comparing Fractions Practice handout

**Introductory Activity**

Hand each student a Would You Rather Introductory Activity handout and have students work independently. Once finished, have students share their answer with a partner then discuss whole group.

**Plan for Instruction**

- Put students into groups, and give each group a set of fraction circles or other fraction manipulatives.
- Have students pick out two different fraction pieces and have them describe each piece. Ask, “What do you notice about the size of each piece?”, “How would you compare them?”
- Have students write an inequality statement for the two fraction pieces they selected. Have them justify why their inequality statement is true.
- Students should then share their statements with each other and be encouraged to discuss how each of the fractions in the inequalities has the same numerator. Ask, “Would this work for comparing other fractions with the same numerator? Have students try several other fractions and then come up with a generalization that if fractions have same numerator, the denominators show the piece size (larger denominators, smaller pieces).
- Conduct a whole class discussion about student generalizations.
- Pose the question, “Would your generalization work if the denominators were the same and the numerators were different?”
Have groups create several fractions with the same denominator and compare them. Once students see it does not work, have them come up with a generalization for like denominators.

Next have student groups build $\frac{3}{4}$ and $\frac{2}{3}$ and ask them which is bigger. Encourage a discussion about how they can compare these fractions. Have groups build $\frac{5}{6}$ and $\frac{8}{9}$ and discuss the comparison. If the idea that each fraction is one away from a whole doesn’t surface, introduce it and have students discuss this strategy.

Have student groups build and compare $\frac{2}{5}$ and $\frac{3}{4}$ then have them build and compare $\frac{3}{7}$ and $\frac{5}{8}$. Ask, “What strategy could you use to compare these two sets of fractions.” If student groups don’t come up with – one is less than $\frac{1}{2}$ and one is greater than $\frac{1}{2}$ introduce this strategy and have a discussion. Give several more fraction pairs that students can use to practice this strategy.

Either with a partner or individually, have students complete the Comparing Fractions Handout to practice using the strategies discovered in this lesson.

**Pulling It All Together (Reflection).**

Which strategy would you use to compare $\frac{2}{9}$ and $\frac{3}{5}$? Explain your thinking. Will this strategy work to compare $\frac{5}{6}$ and $\frac{7}{8}$? Why or why not.

**Note:** The following pages are intended for classroom use for students as a visual aid to learning.

Virginia Department of Education 2018
Would You Rather Introductory Activity

Would you rather have $\frac{1}{4}$ of a pizza or $\frac{3}{5}$ of a pizza? Use the picture, numbers and words to justify your answer.
Comparing Fractions Practice

Compare the following fractions using the symbols <, >, =. Next to the inequality, write which strategy you used.

1) \( \frac{2}{5} \) \( \underline{\quad} \) \( \frac{3}{5} \)

2) \( \frac{1}{9} \) \( \underline{\quad} \) \( \frac{1}{10} \)

3) \( \frac{5}{7} \) \( \underline{\quad} \) \( \frac{4}{7} \)

4) \( \frac{2}{3} \) \( \underline{\quad} \) \( \frac{4}{10} \)

5) \( \frac{6}{7} \) \( \underline{\quad} \) \( \frac{8}{9} \)

6) \( \frac{10}{12} \) \( \underline{\quad} \) \( \frac{10}{11} \)

7) \( \frac{5}{6} \) \( \underline{\quad} \) \( \frac{4}{5} \)

8) \( \frac{8}{11} \) \( \underline{\quad} \) \( \frac{4}{12} \)