# *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 inequailities 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  and and ask them which is bigger. Encourage a discussion about how they can compare these fractions. Have groups build and 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 andthen have them build and compare  and . 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 ½ and one is greater than*  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 and? Explain your thinking. Will this strategy work to compare and ? Why or why not.

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

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**Would You Rather Introductory Activity**

Would you rather have of a pizza or of a pizza? Use the picture, numbers and words to justify your answer.

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Would you rather have of a pizza or 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)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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3)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8)  \_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_