Comparing Fractions

Prep/review:

1. If a yellow piece is the whole unit, how can you show the fraction 1/3? How can you show the fraction 2/3?

2. Compare these unit (numerator 1) fractions:

Color	How many to make a whole circle?	Which takes **MORE** pieces to cover the whole circle?	Which has **SMALLER** pieces?
Brown			
Orange			
Orange			
White			
Gray			
Green			

3. 18 goos = 1 whole
12 boos = 1 whole
Which is smaller, 3 boos or 3 goos? How do you know?

On Computer

Web site with virtual manipulatives: https://www.geogebra.org/m/s5Jh7EJ4
Reading from the Rational Number Project (read page 4: Additional Notes to the Teacher)
http://www.cehd.umn.edu/ci/rationalnumberproject/RNP2/Lesson01.pdf

4. **Same Denominator:** Choose 3 pairs of fractions that can be readily compared because they have the same denominator. Make both fractions either with your paper fraction circles or with the online fraction circles, using the whole (black) circle as the whole unit. Write the pair of fractions with a < or > sign to show which is larger

a. b. c.

d. For one of your fraction pairs (above), sketch what the fraction circle pictures are (using the whole circle as the whole unit).

e. Write an explanation in words that uses the same denominator strategy to say why the larger fraction is larger.

5. **Same Numerator, unit (single) fractions**: a. To use the same numerator strategy, students first need to understand how single unit fractions compare. Write your best explanation for how you would know which is bigger of 1/11 or 1/12.

6. Same Numerator: Choose 3 pairs of fractions that can be readily compared because they have the same numerator. Make both fractions either with your paper fraction circles or with the online fraction circles, using the whole (black) circle as the whole unit. Write the pair of fractions with a < or > sign to show which is larger

a. b. c.

d. For one of your fraction pairs (above), sketch what the fraction circle pictures are (using the whole circle as the whole unit).

e. Write an explanation in words that uses the same numerator strategy to say why the larger fraction is larger.

7. **Transitive:** Choose 3 pairs of fractions that can be readily compared because you can compare them to 1/2. Make both fractions either with your paper fraction circles or with the online fraction circles, using the whole (black) circle as the whole unit. Write the pair of fractions with a < or > sign to show which is larger

a. b. c.

d. For one of your fraction pairs (above), sketch what the fraction circle pictures are (using the whole circle as the whole unit).

e. Write an explanation in words that uses the transitive strategy to say why the larger fraction is larger. Don't forget to explain how you know the comparisons to 1/2.

8. Residual: Choose 3 pairs of fractions that can be readily compared because you can compare the amounts less than 1. Make both fractions either with your paper fraction circles or with the online fraction circles, using the whole (black) circle as the whole unit. Look for the residual amount in your visual. Write the pair of fractions with a < or > sign to show which is larger

a. b. c.

d. For one of your fraction pairs (above), sketch what the fraction circle pictures are (using the whole circle as the whole unit). Label the residual amount.

e. Write an explanation in words that uses the same residual strategy to say why the larger fraction is larger.