

Pre-Instruction

1. List the Standard. Underline the nouns (what students will know) and highlight the verbs (what student will do):

3.NF.3 (c,d)

c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.

Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.

d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize the comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $<$, $=$, or $>$, and justify the conclusions, e.g., by using a visual fraction model.

2. Mathematical Practices

Make sense of problems and persevere in solving them.

Reason abstractly and quantitatively.

Construct viable arguments.

Model with mathematics.

Use appropriate tools strategically.

Attend to precision.

Look for and make use of structure.

Look for and express regularity in repeated reasoning.

3. I Can Statements – Put learning targets in student friendly terms.

I can express whole numbers as fractions.

I can recognize fractions that are equivalent to whole numbers.

I can compare and record the results of two fractions with the same numerator or the same denominator by reasoning about their size.

I can recognize the comparisons are valid only when the two fractions refer to the same whole.

Depth of Knowledge of the standard (Highlight the Level of the Learning Target):

Level 1 Recall; Level 2 – Skill/Concept; Level 3 – Strategic Thinking; Level 4 – Extended Thinking

4. List the skills students need to know in order to begin this standard:

1. Student will need to know vocabulary - equivalent, compare, whole number, numerator, denominator
2. Students need to understand the meaning of the mathematical symbols $<$, $>$, $=$.
3. Students will need to know what a fraction is (parts of a whole, parts of a set)
4. Students will need to understand mathematical models.

5. What type of assessment am I going to write? [selected response (m/c, t/f, y/n, matching, fill in ____) **or** constructed response (**short:** word, phrase, sentence, single problem; **extended:** multi-step operations in math, problem solving)] List the assessment questions.

Assessment 1 - Exit slip; Students will write on a post-it note the fraction for the whole number 8 and write the whole number for the fraction $6/6$.

Assessment 2 - Use fraction bars to compare $1/4$ and $3/4$. Use symbols in your explanation to prove which fraction is greater than, less than, or equal to. Do the same with the fraction $4/8$ and $4/10$.

Assessment 3 - Show students two whole pizzas (one large and one small). Each pizza is shaded $1/2$. Are those fractions equivalent? Justify why or why not.

6. Scoring Guide

Assessment 1:

Exceeds Expectations: Student can determine that 6 is = to $6/1$ and $6/6$ is - to 1

Proficient: Student wrote the fraction for 8 and the whole number for $6/6$.

Approaching Proficiency: Student wrote the fraction but could not write the whole number or student wrote the whole number but not the fraction.

Not Proficient: Student could not write the fraction or the whole number.

Assessment 2:

Exceeds Expectations: Student was able to justify their answers and correctly compare the fractions with correct symbols.

Proficient: Student could correctly compare $\frac{1}{4}$ to $\frac{3}{4}$ and $\frac{4}{8}$ to $\frac{4}{10}$ using fraction bars with correct symbols.

Approaching Proficiency: Student could compare same numerator or denominator but not both.

Not Proficient: Student could not compare fractions with same numerator or denominator.

Assessment 3:

Exceeds Expectations: Student can identify the fractions are not equivalent, explain why not, and construct an equivalent model.

Proficient: Student could identify the fractions are not equivalent and explain why not.

Approaching Proficiency: Student could identify the fractions are not equivalent but could not justify their answer.

Not Proficient: Student could not identify the fractions are not equivalent and could not justify their answer.

Power Standard: 3.NF.3 (c,d)

c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.

Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.

Directions: Students will write on a post-it note the fraction for the whole number 8 and write the whole number for the fraction 6/6.

Assessment 1 Tracking Sheet

Assessment 1:

Exceeds Expectations: Student can determine that 6 is = to 6/1 and 6/6 is - to 1

Proficient: Student wrote the fraction for 8 and the whole number for 6/6.

Approaching Proficiency: Student wrote the fraction but could not write the whole number or student wrote the whole number but not the fraction.

Not Proficient: Student could not write the fraction or the whole number.

Name: _____ Date _____

Power Standard: 3.NF.3 (c,d)

Formative Assessment 2

Directions: Use fraction bars to compare $\frac{1}{4}$ and $\frac{3}{4}$. Use symbols in your explanation to prove which fraction is greater than, less than, or equal to. Do the same with the fraction $\frac{4}{8}$ and $\frac{4}{10}$.

$\frac{1}{4}$

$\frac{3}{4}$

$\frac{4}{8}$

$\frac{4}{10}$

Power Standard: 3.NF.3 (c,d)

d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize the comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $<$, $=$, or $>$, and justify the conclusions, e.g., by using a visual fraction model.

Formative Assessment 2

Tracking Sheet

Assessment 2 Rubric:

Exceeds Expectations: Student was able to justify their answers and correctly compare the fractions with correct symbols.

Proficient: Student could correctly compare $\frac{1}{4}$ to $\frac{3}{4}$ and $\frac{4}{8}$ to $\frac{4}{10}$ using fraction bars with correct symbols.

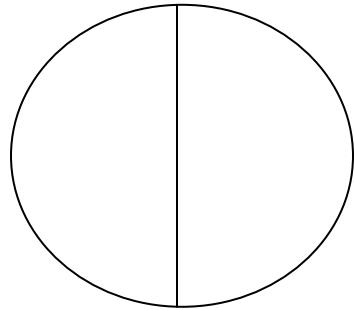
Approaching Proficiency: Student could compare same numerator or denominator but not both.

Not Proficient: Student could not compare fractions with same numerator or denominator.

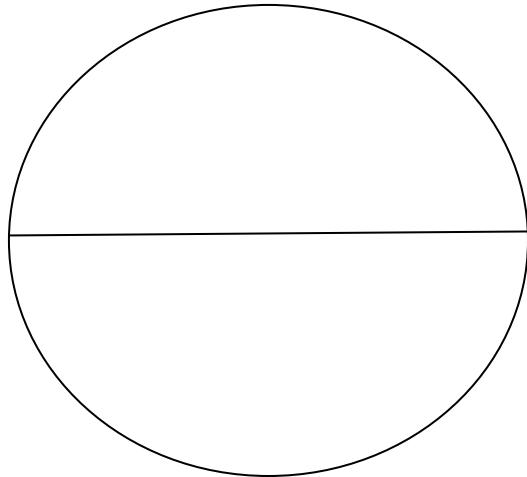
Name: _____ Date _____

Power Standard: 3.NF.3 d

Sam and Jenny ordered pizzas for dinner. Sam ate $\frac{1}{2}$ of his pizza and Jenny ate $\frac{1}{2}$ of her pizza. Did they both eat the same amount of pizza? Justify your answer.



Sam's



Jenny's

Power Standard: 3.NF.3 (c,d)

d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize the comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $<$, $=$, or $>$, and justify the conclusions, e.g., by using a visual fraction model.

Formative Assessment 3:

Tracking Sheet

Class: _____ Grade: 3

Assessment 3 Rubric:

Exceeds Expectations: Student can identify the fractions are not equivalent, explain why not, and construct an equivalent model.

Proficient: Student could identify the fractions are not equivalent and explain why not.

Approaching Proficiency: Student could identify the fractions are not equivalent but could not justify their answer.

Not Proficient: Student could not identify the fractions are not equivalent and could not justify their answer.