Name _____ Date _____

1. Jerry put 7 equally spaced hooks on a straight wire so students could hang up their coats. The whole length is from the first hook to the last hook.

   a. On the picture below, label the fraction of the wire's length where each hook is located.

   b. At what fraction is Betsy's coat if she hangs it at the halfway point?

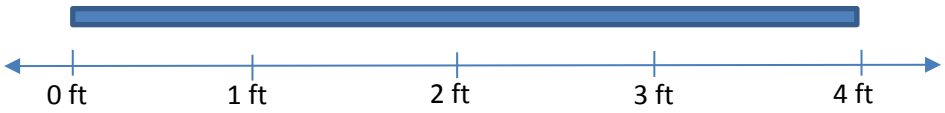
   c. Write a fraction that is equivalent to your answer for Part (b).

2. Jerry used the picture below to show his son how to find a fraction equal to $\frac{2}{3}$. Explain what Jerry might have said and done using words, pictures, and numbers.

3. Jerry and his son have the exact same granola bars. Jerry has eaten $\frac{3}{6}$ of his granola bar. His son has eaten $\frac{3}{8}$ of his own granola bar. Who has eaten more? Explain your answer using words, pictures, and numbers.

4. Jerry has a fruit roll that is 4 feet long.

   a. Label the number line to show how Jerry might cut his fruit roll into pieces $\frac{1}{3}$ of a foot long. Label every fraction on the number line, including renaming the wholes.



   b. Jerry cut his fruit roll into pieces that are $\frac{1}{3}$ of a foot long. Jerry and his 2 sons each eat one piece. What fraction of the whole fruit roll is eaten? Explain your answer using words, pictures, and numbers.

   c. Jerry's son says that 1 third is the same as 2 sixths. Do you agree? Why or why not? Use words, pictures, and numbers to explain your answer.

End-of-Module Assessment Task Standards Addressed — Topics A–F

Develop understanding of fractions as numbers.

3.NF.1 Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a/b* as the quantity formed by *a* parts of size 1/*b*.

3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.

b. Represent a fraction *a/b* on a number line diagram by marking off *a* lengths 1/*b* from 0. Recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b* on the number line.

3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.

b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model.

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*.

d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that 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.

Reason with shapes and their attributes.

3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*

Evaluating Student Learning Outcomes

A Progression Toward Mastery is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency.* In this chart, this progress is presented from left (Step 1) to right (Step 4). The learning goal for students is to achieve Step 4 mastery. These steps are meant to help teachers and students identify and celebrate what the students CAN do now and what they need to work on next.

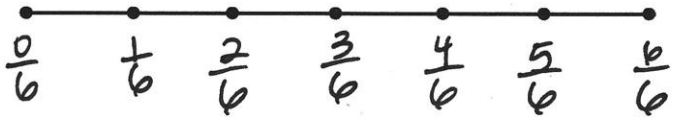
A Progression Toward Mastery				
Assessment Task Item and Standards Assessed	**STEP 1 Little evidence of reasoning without a correct answer. (1 Point)**	**STEP 2 Evidence of some reasoning without a correct answer. (2 Points)**	**STEP 3 Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)**	**STEP 4 Evidence of solid reasoning with a correct answer. (4 Points)**
1 **3.NF.2a** **3.NF.3a**	The student is unable to label the number line.	The student labels the number line, but thinks $\frac{2}{6}$ is $\frac{1}{2}$ because of the 2 in the numerator. Clear flaws in understanding are visible.	The student shows good reasoning and makes one small mistake, such as failing to correctly label $\frac{0}{6}$, or failing to identify the fraction equal to $\frac{1}{2}$.	The student correctly: ▪ Labels the number line with sixths. ▪ Identifies $\frac{3}{6}$ as the halfway point for Betsy's coat. ▪ Writes any fraction equivalent to $\frac{3}{6}$, such as $\frac{1}{2}$.
2 **3.NF.3b** **3.G.2** **3.NF.1**	The student does not demonstrate understanding.	The student may partition the strip correctly, but gives no clear explanation.	The student's explanation lacks clarity, but the drawing shows understanding. The strip is labeled.	The student uses words, pictures, and numbers to: ▪ Explain how Jerry would make smaller equal parts. ▪ Name a fraction equal to $\frac{2}{3}$, such as $\frac{4}{6}$, $\frac{6}{9}$, or $\frac{8}{12}$.

A Progression Toward Mastery				
3 **3.NF.3d** **3.NF.1**	The student does not demonstrate understanding of the meaning of the question and does not produce meaningful work.	The student may say that the son has eaten more, but does show some understanding. This is possibly evidenced by two fraction strips correctly partitioned, but perhaps not the same size.	The student shows that Jerry has eaten more and compares $\frac{3}{6}$ to $\frac{3}{8}$ correctly; the explanation includes some reasoning.	The student clearly explains: ▪ Jerry has eaten more of his granola bar. ▪ $\frac{3}{6} > \frac{3}{8}$. ▪ $\frac{3}{6}$ is greater than $\frac{3}{8}$ because the units are larger.
4 **3.NF.2a, b** **3.NF.3a, b, c, d** **3.NF.1**	The student does not demonstrate understanding of the meaning of the question and does not produce meaningful work.	The student completes part of the problem correctly, but may fail to draw accurate models or explain reasoning.	The student completes Parts (a), (b), and (c) correctly; the explanation includes some reasoning.	The student correctly: ▪ Shows all of the fractions from $\frac{0}{3}$ up to $\frac{12}{3}$ numerically, including renaming the wholes. ▪ Explains $\frac{1}{4}$ or $\frac{3}{12}$ of the whole roll was eaten with an accurate model in Part (b). ▪ Uses words, pictures, and numbers to explain that $\frac{1}{3}$ is equal to $\frac{2}{6}$ in Part (c).

Name Gina Date _____

1. Jerry put 7 equally spaced hooks on a straight wire so students could hang up their coats. The whole length is from the first hook to the last hook.

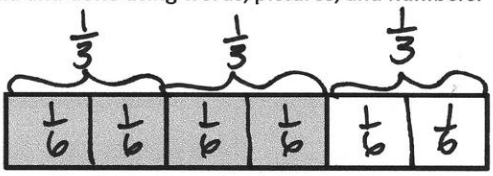
   a. On the picture below, label the fraction of the wire's length where each hook is located.



   b. At what fraction is Betsy's coat if she hangs it at the halfway point? $\frac{3}{6}$

   c. Write a fraction that is equivalent to your answer for Part (b). $\frac{1}{2}$

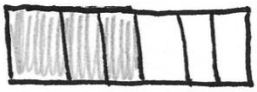
2. Jerry used the picture below to show his son how to find a fraction equal to $\frac{2}{3}$. Explain what Jerry might have said and done using words, pictures, and numbers.

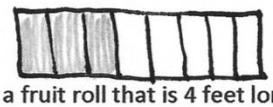


$\frac{2}{3} = \frac{4}{6}$

I made each $\frac{1}{3}$ into 2 smaller, equal parts. So then it wasn't just thirds anymore, it was sixths too! I can see from the shading that $\frac{2}{3}$ is the same as $\frac{4}{6}$.

3. Jerry and his son have the exact same granola bars. Jerry has eaten $\frac{3}{6}$ of his granola bar. His son has eaten $\frac{3}{8}$ of his. Who has eaten more? Explain your answer using words, pictures, and numbers.

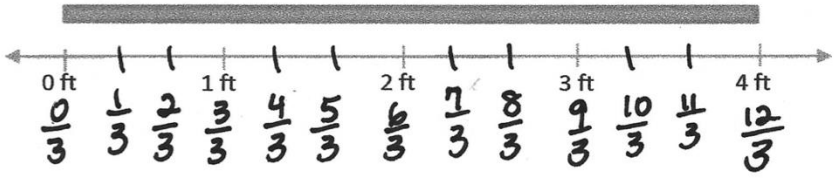
Jerry  $\frac{3}{6}$ $\frac{3}{6} > \frac{3}{8}$

Son  $\frac{3}{8}$

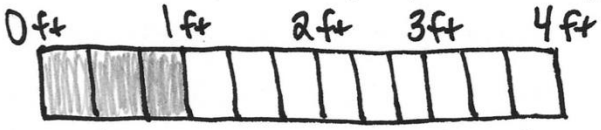
Jerry ate more because his pieces are bigger than his son's pieces and they ate the same number of pieces.

4. Jerry has a fruit roll that is 4 feet long.

a. Label the number line to show how Jerry might cut his fruit roll into pieces $\frac{1}{3}$ of a foot long. Label every fraction on the number line, including renaming the wholes.

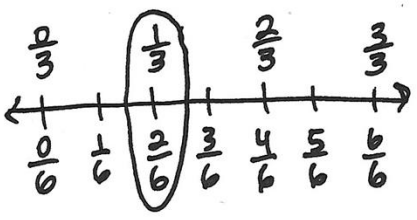


b. Jerry cut his fruit roll into pieces that are $\frac{1}{3}$ of a foot long. Jerry and his 2 sons each eat one piece. What fraction of the whole fruit roll is eaten? Explain your answer using words, pictures, and numbers.



$\frac{1}{4}$ of the whole roll was eaten because together they ate 1 of the 4 feet. Or, you can say $\frac{3}{12}$ was eaten because there are 12 pieces and they ate 3 pieces.

c. Jerry's son says that 1 third is the same as 2 sixths. Do you agree? Why or why not? Use words, pictures, and numbers to explain your answer.



Yes, I agree. When I draw a number line with thirds and sixths, $\frac{1}{3}$ and $\frac{2}{6}$ are at the same point. That means they're equal!