Math Live – Equivalent Fractions: Assessment Task

Grade: 5 St	trand: Number	Outcome: 7
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SPECIFIC LEARNER OUTCOME – Number

N7	Demonstrate an understanding of fractions by using concrete, pictorial and symbolic representations to:	
	 create sets of equivalent fractions compare fractions with like and unlike denominators. 	

PROCESSES

Communication (C), Connections (CN), Mental Mathematics and Estimation (ME), Problem Solving (PS), Reasoning (R), Technology (T), Visualization (V)

C, CN, PS, R, V

EVIDENCE the student has achieved the outcomes

Each student will:

- create models of equivalent fractions as part of wholes using manipulatives.
- explain the relationship between two equivalent fractions using drawings, symbols and words.
- illustrate how to find equivalent fractions given the numerator of both fractions.
- provide an example of the importance of the size of the referent whole in comparing fractions.

TEACHER NOTE

- In this assessment task, students will be asked to demonstrate their understanding of fractions as part of a whole (not as part of a set). They will use manipulatives to create models of equivalent fractions and then explain the relationship between the two fractions using drawings, symbols, and words.
- Students should have easy access to manipulatives and grid paper.
- Students must understand that the "whole" must be the same size when comparing or creating equivalent fractions. Students should also connect equivalent fractions to concepts of equal area regardless of the shape.
- Early finishers can write similar problems with equivalent fractions as part of sets.

Math Live – Equivalent Fractions: Assessment Task

There were two pans of lasagna at the school picnic. Parents were careful to cut each pan of lasagna into equal portions. Tanya had 2 portions from one pan, while Daniel took 4 portions from the other pan. They both took the same amount of lasagna. How is this possible?



1. Show how the lasagna was divided into portions so Tanya's 2 portions are equal to Daniel's 4 portions. Shade in the portion of lasagna eaten by each child.

What fraction of the lasagna did Tanya eat?

What fraction of the lasagna did Daniel eat?

2. How do you know that these two fractions are equivalent? Explain your thinking using pictures, symbols, and words.

3. Parents also bought two cakes for dessert. This time, Daniel took <u>more</u> cake than Tanya. Draw a picture to show how Tanya and Daniel could have each eaten 1/6 of their cakes. Justify your answer.¹

¹ Diagnostic Mathematics Program: Numeration Division II

Math Live – *Equivalent Fractions*: Scoring Guide

Level Criteria	Represents equivalent fractions Question #1	Proves that two fractions are equivalent Question #2	Provides an example of the importance of the referent whole in comparing fractions Question #3
Wow! Yes	The student draws accurate representations of the two fractions using referent wholes of the same size.	The student provides clear evidence of both conceptual and procedural understanding, such as reference to the relative size of the parts of the whole and finding common denominators. The student provides some evidence of conceptual	The student provides an accurate drawing illustrating sixths of different sizes and states that the size of the referent whole is different for each cake.
		understanding, such as "sixths are half of thirds," as well as procedural knowledge, such as finding common denominators.	
Yes, but	The student draws representations of the two fractions but may not ensure that the wholes are the same size.	The student provides evidence of only procedural understanding, such as finding common denominators or cross-multiplying to compare the fraction s.	The student provides a drawing to illustrate sixths of different sizes and simply states that one piece of cake is bigger than the other.
No, but	The student draws inaccurate or confusing representations of the two fractions.	The student provides little evidence of understanding the relationship between equivalent fractions.	The student provides an inaccurate drawing of sixths of different sizes and/or a confused explanation to compare the pieces of cake.
Insufficient / Blank	No score is awarded due to insufficient evidence of student learning based on the requirements of the assessment task.	No score is awarded due to insufficient evidence of student learning based on the requirements of the assessment task.	No score is awarded due to insufficient evidence of student learning based on the requirements of the assessment task.

Wow!

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4. Show how the lasagna was divided into portions so Tanya's 2 portions are equal to Daniel's 4 portions. Shade in the portion of lasagna eaten by each child.

Le Continue de las agria la continue de la continue		
What fraction of the lasagna did Tanya eat?		
2/6 What fraction of the lasagna did Daniel eat?		
4/1200/3		

Wow!

5. How do you know that these two fractions are equivalent? Explain your thinking using pictures, symbols, and words.

These fractions are equivalent because if you divide them to their lowest form EX.8/2-2=4/6-2= Athat's the lowest EX.16/2-2=8/2-2-4/22 Both of the lowest of that's the lowest form fractions are form Equal. If I were to crase every other If in # 2 the pieces would be equivalent to # 1. The wholes are the same size but cut into different size parts.

6. Parents also bought two cakes for dessert. This time, Daniel took <u>more</u> cake than Tanya. Draw a picture to show how Tanya and Daniel could have each eaten 1/6 of their cakes. Justify your answer.



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1. Show how the lasagna was divided into portions so Tanya's 2 portions are equal to Daniel's 4 portions. Shade in the portion of lasagna eaten by each child.



Tanya ate 3 of the lasagna and Daniel ate 4 of the lasagna you know they ate the same amount because 4 and 3 are the same fraction. I figured this out by dividing a shape into 3 and dividing the other shape in 6.

What fraction of the lasagna did Tanya eat?	- Alex
What fraction of the lasagna did Daniel eat?	4

Yes

2. How do you know that these two fractions are equivalent? Explain your thinking using pictures, symbols, and words.



3. Parents also bought two cakes for dessert. This time, Daniel took <u>more</u> cake than Tanya. Draw a picture to show how Tanya and Daniel could have each eaten 1/6 of their cakes. Justify your answer.



Yes, but

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1. Show how the lasagna was divided into portions so Tanya's 2 portions are equal to Daniel's 4 portions. Shade in the portion of lasagna eaten by each child.

first pan of lasagna	second pan of lasagna
33333 D-Daniel	-Tanya
Do What I did is I f two portions and Daniel I Tanya must of had two 4 smaller portions since one pan 4 big portions d therefore making 2 th What fraction of the lasagna o	did Tanya eat?
What fraction of the lasagna of	did Daniel eat?

Yes, but 2. How do you know that these two fractions are equivalent? Explain your thinking using pictures, symbols, and words. Daniel 8 I know these two fractions are alike because I crossed multiplied. lanya Example #1 2×2 would equal into 4 therefore making Example #2 them equivalent. 3. Parents also bought two cakes for dessert. This time, Daniel took more cake than Tanya. Draw a picture to show how Tanya and Daniel could have each eaten 1/6 of their cakes. Justify your answer. second cake first (ake lanya -Doniel could have been bigger or Doniels cake was cut into bigger slices than Tanya's.

No, but

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1. Show how the lasagna was divided into portions so Tanya's 2 portions are equal to Daniel's 4 portions. Shade in the portion of lasagna eaten by each child.

Tanyas	Daniel
What fraction of the lasagna did Ta What fraction of the lasagna did Da	anya eat? <u>0.02</u> aniel eat? <u>0.04</u>

No, but

2. How do you know that these two fractions are equivalent? Explain your thinking using pictures, symbols, and words. They are equivalent because they are 2 apart from echother. When you X 2x2 it = 4 Tanya Daniel 3. Parents also bought two cakes for dessert. This time, Daniel took more cake than Tanya. Draw a picture to show how Tanya and Daniel could have each eaten 1/6 of their cakes. Justify your answer. Tanya Daniel Well Tanga only ate I piece out of 1/6 then paniel only ate 5 pices.