

Math Grade 3 D

Grade Level Standard(s):

KY.3.NF.3

Materials:

- Math 3 D Visual Fraction Models
- Math 3 D Attainment Task Questions for Student Use

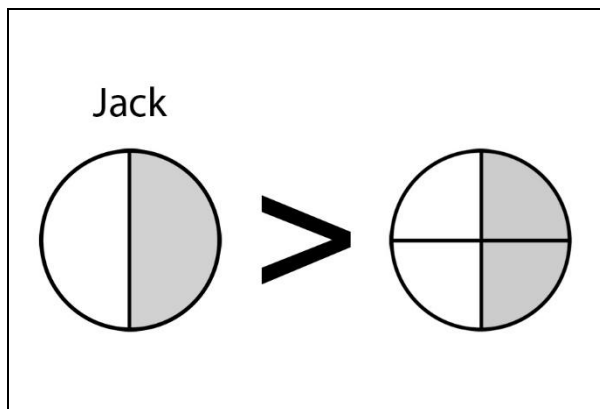
Response Code:

- Indicate the answer provided by the student.

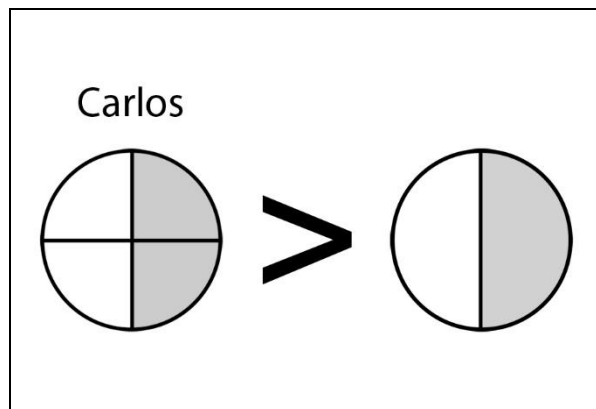
Text Coding:

- “Quotation marks” indicate the script that the teacher should read to the student.
- *Italicized text* provides further direction for the test administrator.
- Words in parenthesis () are optional; they may replace or be read in addition to the word(s) immediately preceding.

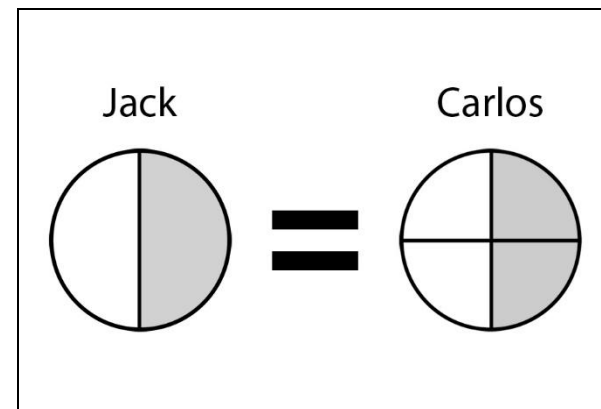
a.

Jack because $\frac{1}{2} > \frac{2}{4}$ 

b.

Carlos because $\frac{2}{4} > \frac{1}{2}$ 

c.

Both colored the same because $\frac{1}{2} = \frac{2}{4}$ 

Before beginning task administration, please ensure that all conditions specified in the administration protocol (starting on page 9 of the Administration Guide Overview and Attainment Task Administration) have been met. Inform the student that the task is about to start by saying, “We are about to start the task, and I am going to ask you some questions.”

All questions from this task are available for presentation to the student in the material Math 3 D Attainment Task Questions for Student Use.

If needed, remind the student about the task scenario by rereading, “The students in art class are asked to decorate a rectangular piece of paper. They can use crayons, colored pencils, and markers.”

Present the student with Math 3 D Visual Fraction Model 4.

“Jack and Carlos decorated some of their rectangle.”

4. “Jack colored $\frac{1}{2}$ and Carlos colored $\frac{2}{4}$. Who colored more?”

Response Option	Response Rationale
a. Jack because $\frac{1}{2} > \frac{2}{4}$	The student uses the fraction model but incorrectly identifies $\frac{1}{2}$ as larger than $\frac{2}{4}$.
b. Carlos because $\frac{2}{4} > \frac{1}{2}$	The student uses the fraction model but incorrectly identifies $\frac{2}{4}$ as larger than $\frac{1}{2}$.
c. Both colored the same because $\frac{1}{2} = \frac{2}{4}$ (Correct)	The student uses the fraction model and notes that the length of the two fractions is equivalent and concludes that $\frac{1}{2} = \frac{2}{4}$.
Depth of Knowledge (DOK) 1	

Math 3 D Visual Fraction Models



4).



Math 3 D Attainment Task Questions for Student Use

4. Jack colored $\frac{1}{2}$ and Carlos colored $\frac{2}{4}$. Who colored more?

Kentucky Academic Standard: KY.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 same point on a number line.
- b. Recognize and generate simple equivalent fractions. Explain why the fractions are equivalent through writing or drawing.
- c. Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers.
- 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. MP.2, MP.3

Alternate Assessment Target: *Limit full standard to simple equivalent fractions with different denominators limited to 2, 3, 4, 6 using rectangle and number line models.*

Student Group	Number of Students*	Percent Correct #4
All Students	652	44.48%
Gender		
Female	205	49.27%
Male	447	42.28%
Ethnicity		
African American	80	30.00%
American Indian or Alaska Native	<10	Not Reported
Asian	17	58.82%
Hispanic of Latino	56	39.29%
Native Hawaiian of Pacific Islander	<10	Not Reported
White (Non-Hispanic)	458	46.51%
Two or More Races	39	51.28%
English Learner	73	35.62%
Economically Disadvantaged	455	43.74%

*Number of students that attempted the item