



Introduction to Equivalent Fractions & Comparing Fractions



Purpose This activity introduces students to comparing fractions and determining whether or not they are equivalent. It is designed to activate prior knowledge and get students thinking about the size of fractions.

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| <input checked="" type="checkbox"/> Introduction | <input type="checkbox"/> Addition | <input type="checkbox"/> Manipulatives | <input type="checkbox"/> Teacher-Facilitated |
| <input type="checkbox"/> Investigation | <input type="checkbox"/> Subtraction | <input type="checkbox"/> Pictorial Model | <input type="checkbox"/> Tutoring/Intervention |
| <input type="checkbox"/> Practice | <input type="checkbox"/> Multiplication | <input type="checkbox"/> Properties of Operations | <input checked="" type="checkbox"/> Small group |
| <input type="checkbox"/> Posttest | <input type="checkbox"/> Division | <input type="checkbox"/> Choose a Method | <input type="checkbox"/> Centers |
| | | | <input type="checkbox"/> Challenge! |



Setting Up For Instruction

- Make 1 copy of **4.F.9 Bridge Example** so it can be projected using classroom technology.
- Make 1 copy of **4.F.9 Bridge Cards** for every 3–4 students. Cut them out and place them in baggies.
- Make 1 copy of **4.F.9 Bridge** for each student.
- Gather **fraction manipulatives** for students to use as needed.



Thought Extenders

- What is your reasoning?
- Can you draw a diagram to help you explain your reasoning?



How-To Guide

1. Put students in groups of 3–4.
2. Project **4.F.9 Bridge Example**. Ask students to discuss which situation they would prefer and then share their reasoning. Focus on examining their reasoning rather than on marking answers right or wrong. This exercise isn't designed to be graded. See Listening to Reasoning below.
3. Hand out materials.
4. Show students where the **fraction manipulatives** are so they can use them as needed.
5. Ask students to mix up the cards and lay them face down on the table.
6. Students draw 1 card at a time, discuss the problem situation, and write their reasoning on **4.F.9 Bridge**.



Listening to Reasoning (4.1G)

This activity is filled with gross and silly comparisons that invite students to think carefully about the fractions in the problems. In the example problem, students are asked to consider whether they would rather eat $\frac{1}{4}$ of a cup or $\frac{1}{3}$ of a cup of grasshoppers. In your classroom discussion, the “why” of their answer is much more important than which amount they would eat. Here are a few scenarios:

Correct Reasoning

- Student says $\frac{1}{4}$ of a cup because grasshoppers are crunchy (yuck!) and $\frac{1}{4}$ of a cup is less than $\frac{1}{3}$ of a cup.
- Student says $\frac{1}{3}$ of a cup because her grandmother fixes them as a snack and they are delicious. $\frac{1}{3}$ is more than $\frac{1}{4}$. (FYI, grasshoppers are a common food in markets around the world. They are protein rich!)

Incorrect Reasoning

- Student says $\frac{1}{4}$ of a cup because he loves the crunch of grasshoppers. This student is demonstrating that he thinks $\frac{1}{4}$ is larger than $\frac{1}{3}$. An answer like this clues you in to the fact that he needs a tutoring session to work with fraction manipulatives to compare fractions.
- Student says $\frac{1}{3}$ of a cup because they smell bad when her grandmother cooks them. An answer like this clues you in that she also needs a tutoring session to work with manipulatives to compare fractions.

Note: The “mask” problem asks students to compare two equivalent fractions. Any example of correct student reasoning should note that the fractions are equivalent, regardless of how they answer the “would you rather” portion.

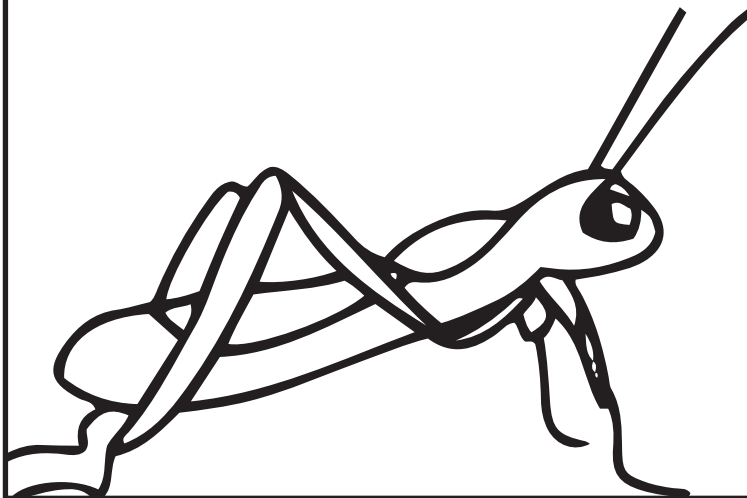


4.F.9 BRIDGE EXAMPLE

Would you rather
eat $\frac{1}{4}$ of a cup of grasshoppers?

OR

eat $\frac{1}{3}$ of a cup of grasshoppers?





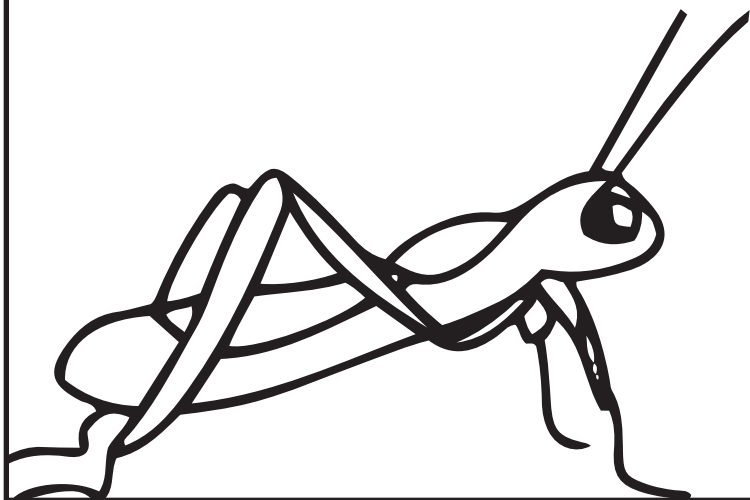
4.F.9 BRIDGE EXAMPLE ANSWER KEY

Would you rather
eat $\frac{1}{4}$ of a cup of grasshoppers?
OR
eat $\frac{1}{3}$ of a cup of grasshoppers?

Look for answers such as these:

I would rather eat $\frac{1}{4}$ of a cup of grasshoppers because grasshoppers are gross and $\frac{1}{4}$ is smaller than $\frac{1}{3}$.

I would rather eat $\frac{1}{3}$ of a cup of grasshoppers because grasshoppers are full of protein and $\frac{1}{3}$ is larger than $\frac{1}{4}$.





4.F.9 BRIDGE CARDS



Would you rather
eat $\frac{1}{4}$ of a cup of grasshoppers
OR
eat $\frac{1}{3}$ of a cup of grasshoppers?

Would you rather
swim in garbage for $\frac{3}{5}$ of an hour
OR
swim in garbage for $\frac{3}{6}$ of an hour?



Would you rather
wear pants $\frac{3}{4}$ made of fly wings
OR
wear pants $\frac{2}{4}$ made of spider webs?

Would you rather
let a skunk spray $\frac{1}{2}$ of your house
OR
let a skunk spray $\frac{1}{3}$ of your house?



Would you rather
lie on a bed that's $\frac{4}{9}$ covered in toenails
OR
lie on a bed that's $\frac{4}{11}$ covered in toenails?

Would you rather
wear an ugly, smelly mask $\frac{3}{6}$ of the year
OR
wear an ugly, smelly mask $\frac{4}{8}$ of the year?



Would you rather
take a bath in fly spit for $\frac{5}{6}$ of an hour?
OR
take a bath in fly spit for $\frac{6}{7}$ of an hour?

Would you rather
walk on hot sand for $\frac{2}{3}$ of an hour
OR
walk on hot sand for $\frac{3}{4}$ of an hour?



4.F.9 BRIDGE

Name: _____

Directions: Make your choice and write your reasoning using the fractions. Be sure to use complete sentences. You may draw pictures to help show your reasoning too.

Which amount would you rather?	Why?
Grasshoppers	
Garbage	
Pants	
Skunk	
Toenails	
Mask	
Hot Sand	
Bath	