

Focus Skill: Number and Operations - Fractions

Common Core Standard(s):

CCSS.MATH.CONTENT.3.NF.A.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 $1/b$.

CCSS.MATH.CONTENT.3.NF.A.3

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

CCSS.MATH.CONTENT.3.NF.A.3.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.

Learning Targets:

- I can discuss fractions as parts of a whole.
- I can recognize equivalent fractions.
- I can explain how I know two fractions are equivalent.

Materials:

- Board or chart paper
- Fraction cut-outs
- Exit tickets



Introduction:

Today we're going to talk about fractions. Fractions are parts of a whole. If I have a pizza, and I eat a slice of it, I'm eating a *fraction* of that whole pizza.

When **you** eat pizza, how many slices do **you** usually have? (Hold up your fingers; turn and talk)

Most pizzas start out with eight slices. Here I have a bunch of pizzas and I'd like some volunteers to come up and color in the number of slices they usually eat.

(Have some students come up, others use an 'agree' symbol if they have the same number, and be sure you have at least one matching fraction – if not, you can add one for your own answer)

I see that (name) likes to eat 3 slices of pizza. When we say that as a fraction, we say it's 3 out of 8, because (name) eats three slices out of the whole entire pizza, which has 8 slices.

(Have students help with a few more, providing the number of slices and the fraction. Then, ask students what they notice about the two matching pizzas. They are equal fractions. Write these on the board with an "=" between them. Do the same for fractions that are showing they are greater than or less than others.)

Here's another example. Let's say I'm making lots of lemonade and have to cut lots of lemons. I cut each lemon into four pieces. If I use one piece of a lemon, what fraction am I using? ($1/4$)



Introduction (continued):

Now what if my friend helps me and ends up cutting the lemons into eight pieces each instead of four? We want to use the same amount so that the lemonade isn't too bitter or too bland. To find this out, we can make our picture **look the same** as the one that shows how much I used before.

(Go through the lemon pictures, color in $\frac{1}{4}$ on one, and have students help fill in $\frac{2}{8}$ on the other to make them look the same)

Excellent! These take up the same amount of the lemon, even though they're different fractions. **When they look the same in the picture but have a different number of pieces, we call them equivalent fractions.**

Guided Practice – each student has a half-sheet with this depiction:

Let's look at these glasses of lemonade. I have $\frac{2}{3}$ of a glass left (color in). How much does my friend have left, if we have **equivalent** amounts?

(Your friend has a glass sectioned into 6 parts – have students color in to find equivalent amount. Write the equivalent fractions on the board.)

Why can we say these are equivalent, even though our cups were split into a different number of parts?

(Because they still have the same amount left in them, no matter how we split it up)

**Activity:**

For this activity each of you will have a picture of a lemon slice that's been split into a different number of parts. Some will have four parts, some will have two, some will have eight, some will have three, and some will have six. Your first job is to color in the fraction that's listed next to your picture. (Color one as an example showing $\frac{6}{6}$.)

Your next job is to find classmates with equivalent fractions to yours, and form groups. How are you going to find them?

(Look for the people that have the same amount colored in as I do, even if they have a different number of sections. Color in another lemon to show $\frac{3}{3}$ and illustrate the way they match up despite having a different number of slices.)

Monitor as students are finding their group members. Go over the rationale one more time before giving students exit tickets.)

Progress Monitor:

- Exit ticket (attached)

Accommodations/Modifications:

- There can be more or less options for the activity – halves and fourths, or thirds and sixths, etc.
- At the end of the lesson, while in groups, you can introduce greater than / less than with fractions by using the pictures to compare the fractions among different groups.

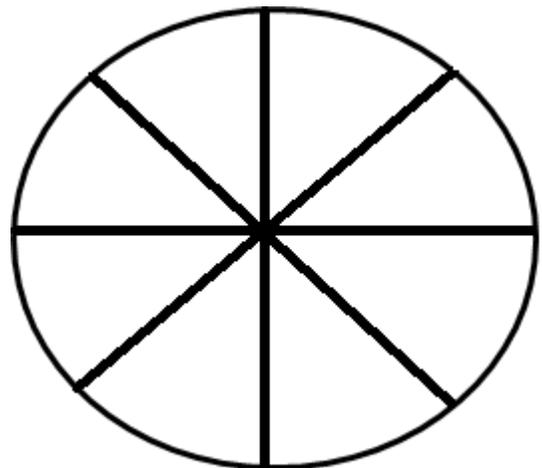
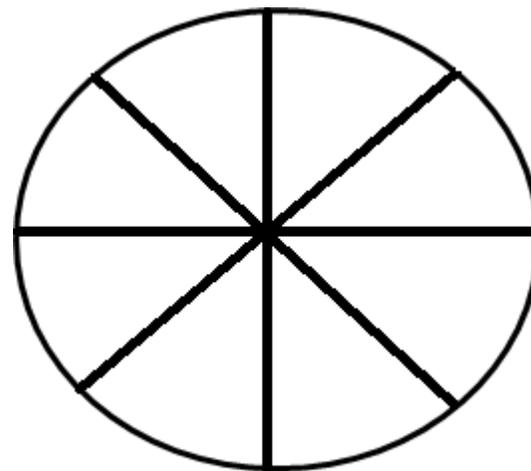
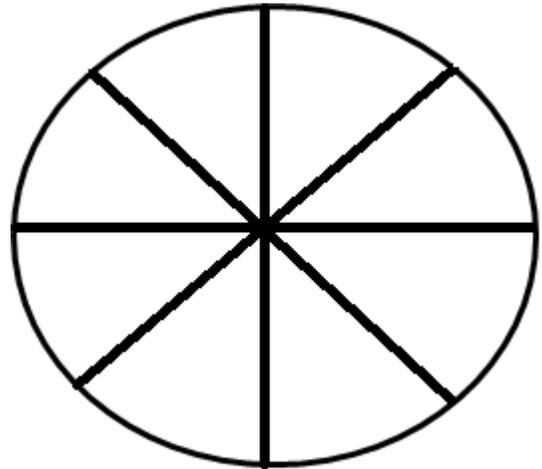
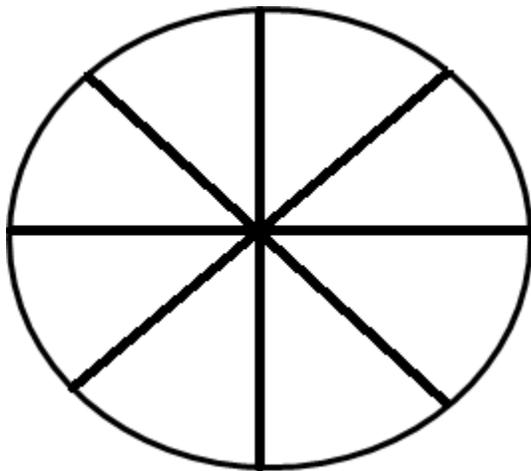
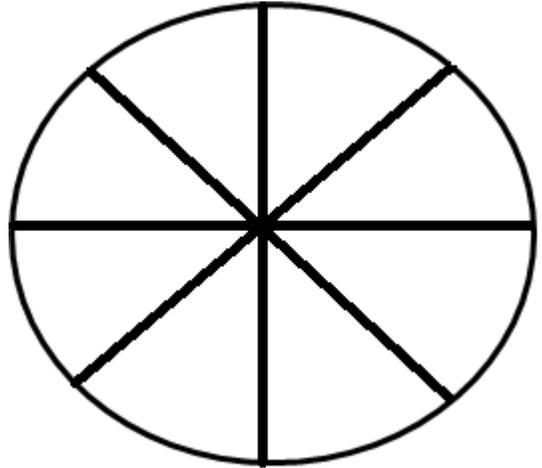
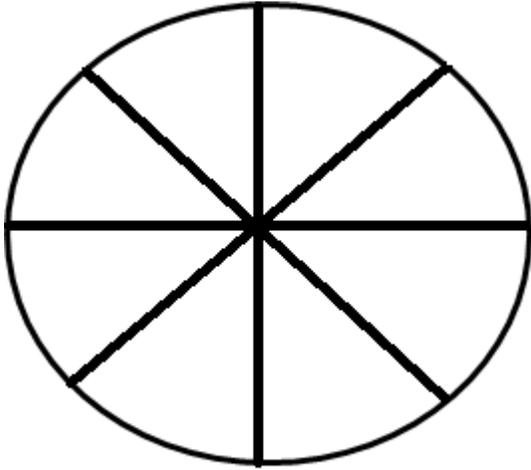
Thank you again for your interest in Alex's Lemonade Stand Foundation!

We hope you will consider supporting ALSF with the help of your class, club, school, district, or community group.

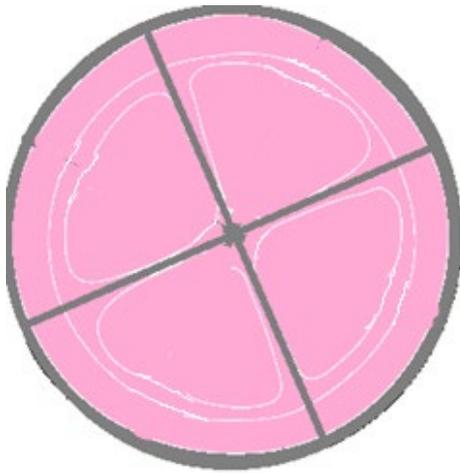
Please contact our office by phone at 866.333.1213
or by e-mail at Takeastand@alexlemonade.org
if you have any questions or need help getting started.



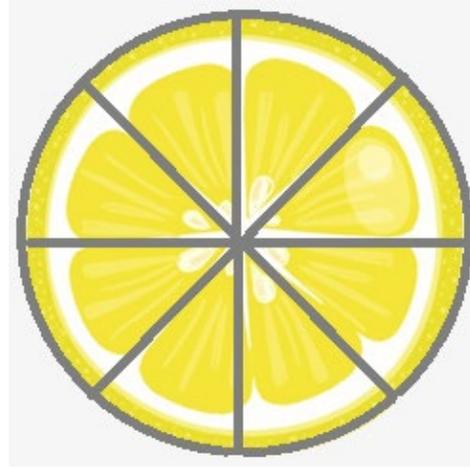
How Many Slices of Pizza?



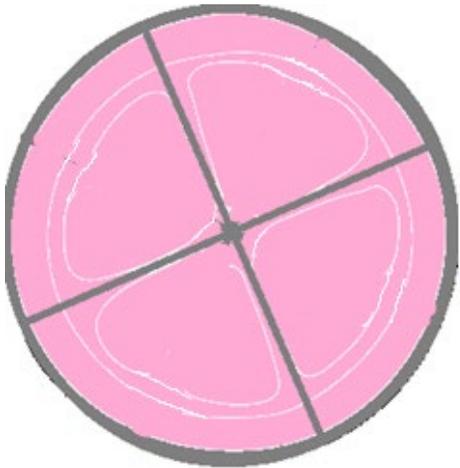
Comparing Lemon Slices



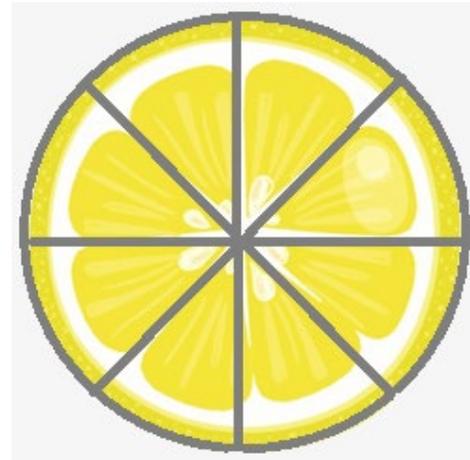
$\frac{1}{4}$



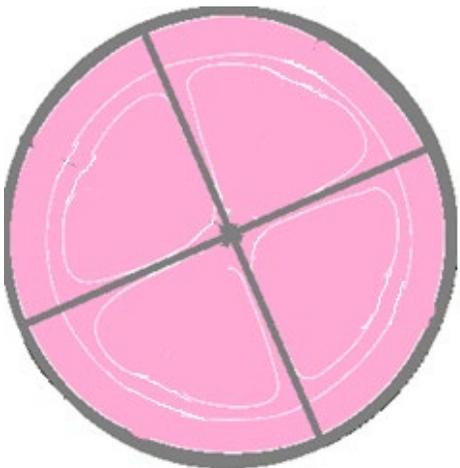
$\frac{2}{8}$



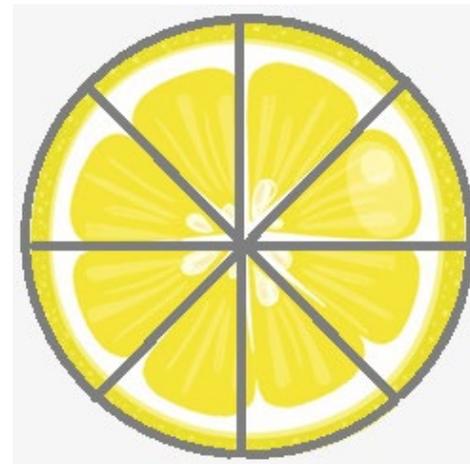
$\frac{2}{4}$



$\frac{4}{8}$



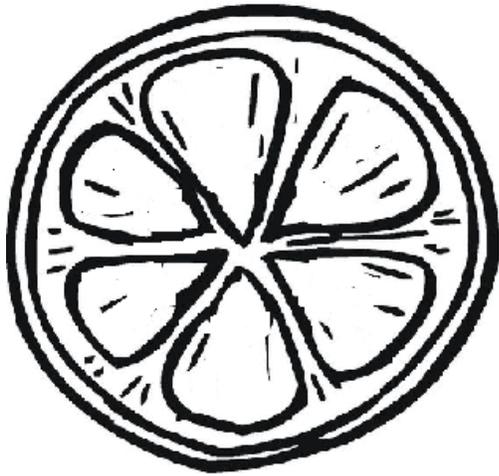
$\frac{4}{4}$



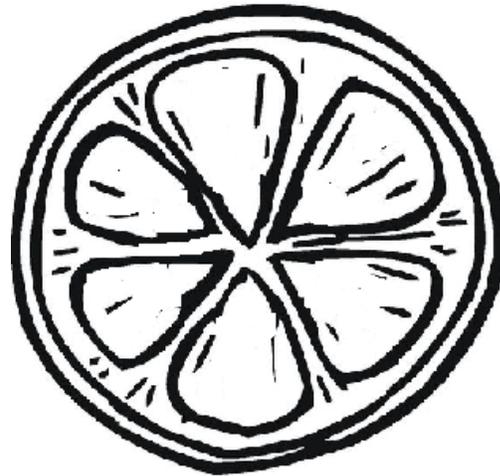
$\frac{8}{8}$



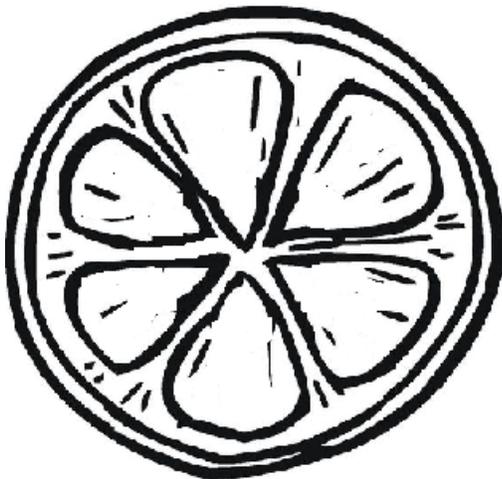
Comparing Lemon Slices



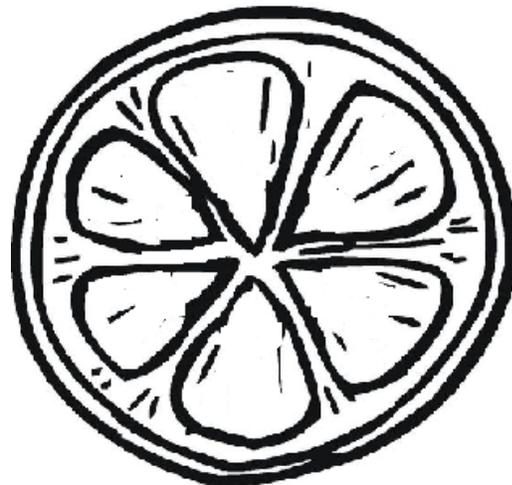
$\frac{2}{6}$



$\frac{2}{6}$



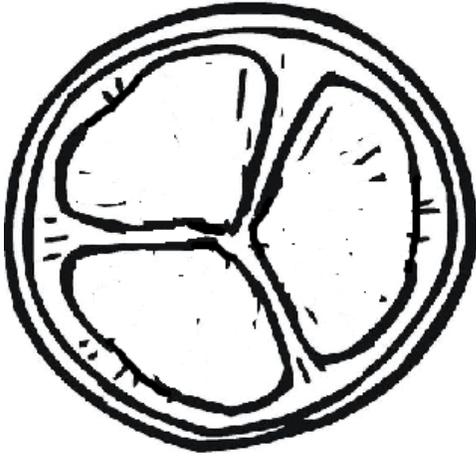
$\frac{6}{6}$



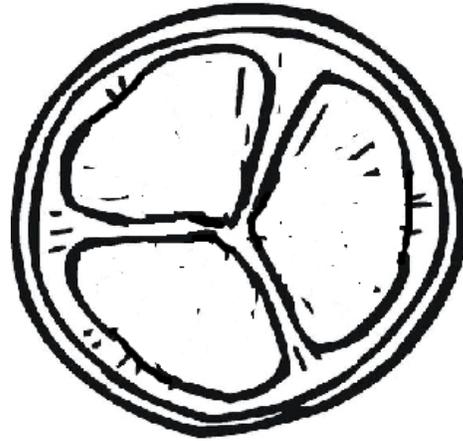
$\frac{6}{6}$



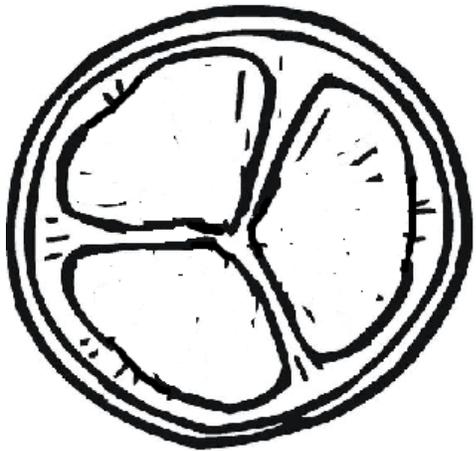
Comparing Lemon Slices (Continued)



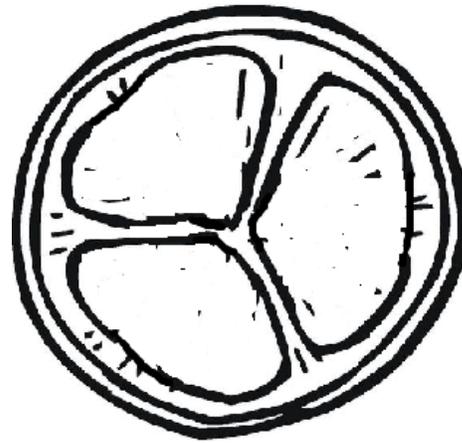
$\frac{1}{3}$



$\frac{1}{3}$



$\frac{3}{3}$



$\frac{3}{3}$



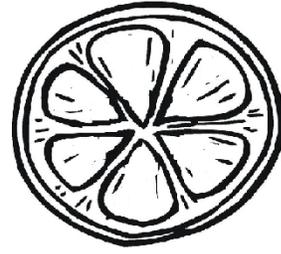
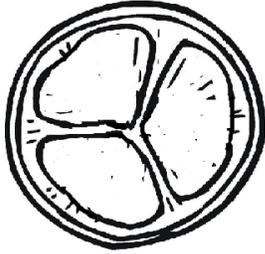
Name _____

Date _____

Fractions Exit Ticket

Color in $\frac{2}{3}$ of the lemon.

Color in $\frac{2}{6}$ of the lemon.



Are these equivalent fractions? Explain your answer.

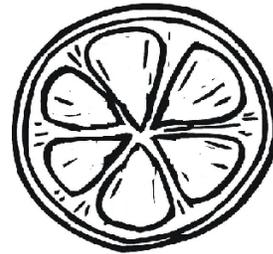
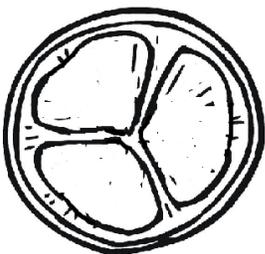
Name _____

Date _____

Fractions Exit Ticket

Color in $\frac{2}{3}$ of the lemon.

Color in $\frac{2}{6}$ of the lemon.



Are these equivalent fractions? Explain your answer.
