### Eureka Math

1st Grade Module 5 Lesson 9

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#### Icons





Read, Draw, Write











Manipulatives Needed







#### Lesson 9

Objective: Partition shapes and identify halves and quarters of circles and rectangles.

#### Suggested Lesson Structure

- Fluency Practice
   Application Problem
   Concept Development
   Student Debrief
   Total Time
- (15 minutes) (5 minutes) (30 minutes) (10 minutes) (60 minutes)



#### Materials Needed

Teacher

 (T) Chart paper, 2 pieces of blank paper of the same size (preferably different colors), document camera

Student

 Core Fluency Sprints, Numeral cards (Lesson 1 Fluency Template), one "=" card, two "+" cards, Pairs of shapes (Template), personal white board



I can divide or partition shapes.

I can name halves and quarters of circles and rectangles.



#### **Core Fluency**

A STORY OF UNITS	Lesson 1 Core Addition Sprint 1	1+5
A	Number Correct:	~~~~
Name	Date	_

\*Write the unknown number. Pay attention to the symbols.

1,	4 + 1 =	16.	4 + 3 =
2.	4 + 2 =	17.	+ 4 = 7
3.	4 + 3 =	18.	7 =+ 4
4.	6 + 1 =	19.	5 + 4 =
5.	6 + 2 =	20.	+ 5 = 9
6.	6 + 3 =	21.	9 =+ 4
7.	1 + 5 =	22.	2 + 7 =
8.	2 + 5 =	23.	+ 2 = 9
9.	3 + 5 =	24.	9 =+ 7
10.	5 += 8	25.	3 + 6 =
11.	8 = 3 +	26.	+ 3 = 9
12.	7 + 2 =	27.	9 =+ 6
13.	7 + 3 =	28.	4 + 4 = + 2
14.	7 + = 10	29.	5 + 4 = + 3
15.	+ 7 = 10	30.	+7=3+6



#### Make It Equal -Addition Expressions

You are going to work with a partner.

Arrange your numeral cards from 0 to 10, including the extra 5. Put the = card between you.

Look at my numbers. 10, 0, 5, 5

Take the cards that match my numbers and make two equivalent expressions.

Here's one way. 10 + 0 = 5 + 5



#### Make It Equal -Addition Expressions

9, 8, 2, 1

3, 6, 4, 7

1, 2, 6, 5

1, 2, 5, 4

3, 5, 4, 2

2, 3, 5, 6



#### Make It Equal -Addition Expressions

3, 4, 5, 6

4, 5, 9, 10

9, 3, 2, 8

8, 5, 9, 4

5, 6, 8, 7

# **Application Problem**

RDW

Emi cut a square brownie into fourths. Draw a picture of the brownie.

Emi gave away 3 parts of the brownie.

How many pieces does she have left?

Use the RDW method to show your thinking. Be ready to share your work during our debrief.

Extra: What part, or fraction, of the whole brownie is left?

Partner A, draw one line to cut your pizza into halves.

Partner B, draw two lines to cut your pizza into quarters.

Who has more slices?

Discuss with your partner.



Partner A, color one slice of your pizza. Show me your slice.

Partner B, color one slice of your pizza. Show me your slice.



Partners, put your half and your quarter next to each other.

Point to the piece of pizza that is larger.

Whose piece is larger?

Yes! The half is larger.



Now, look at your whole pizza.

Who has a larger number of slices?

Yes, Partner B has four slices and Partner A has 2 slices.

Do you want one half of a yummy pizza or one quarter of a yummy pizza?

Discuss this with your partner.

Explain your choice. Be ready to share.



Let's try it again on our chart paper.

We'll add some color and some labels, too.

Let's try that with the rectangles and see if that's still true.

This time, I'll use paper to actually cut and compare.

Which will be larger, one half of this piece of paper or one fourth of the paper?

Talk with your partner, explain your thinking and be ready to share.

I'm going to fold the paper first to be sure I'm cutting equal parts.

I need a volunteer to hold one part.

How much of the paper are they holding?

Yes, one half of the paper!

Let's cut this same-size piece of paper into four equal parts now, so we can compare one fourth, or one quarter, of the paper with one half of the paper.

This time, I'm going to fold the paper in half and then in half again to make four equal parts.



Are all of my parts equal?

Yes!

How much of the paper is each piece?

Yes, one fourth or one quarter of the paper!



I need a volunteer to hold one part.

How much of the paper are they holding?

Yes, one fourth or one quarter of the paper.



Which piece is larger, or greater, one half of the paper or one fourth of the paper?

Yes, one half of the paper!

How many pieces did we make when we cut the paper into halves?

Yes, two pieces.

How many pieces did we make when we cut the paper into fourths or quarters?

Yes, four pieces.

So, when we cut the paper into two pieces to make halves, our pieces were this size.

What happened to the size of our pieces when we cut the same size paper into four pieces to make quarters?

Talk with your partner and be ready to share.



Yes, the parts became smaller.

Why?

Talk with your partner. Be ready to share.

On your personal white boards, you have pairs of the same shape.

Draw lines and color in one half of the first shape, and then draw lines and color in one quarter, or one fourth, of the other shape.

With your partner, see if one fourth is smaller than one half *every time or just sometimes.* 



### Problem Set

the whole shape.



A STORY OF UNITS	Lesson 9 Problem Set 1.5
Name	Date
Label the shaded part of each pict shape.	ure as one half of the shape or one quarter of the
1.	Which shape has been cut into more equal parts?
AB	Which shape has larger equal parts? Which shape has smaller equal parts?
2.	Which shape has been cut into more equal
	Which shape has larger equal parts?
A B	Which shape has smaller equal parts?
<ol> <li>Circle the shape that has a larg sentence true.</li> </ol>	er shaded part. Circle the phrase that makes the
	The larger shaded part is
	(one half of / one quanter of)



### Problem Set



A STORY OF UNITS

Lesson 9 Problem Set 1.5

Color part of the shape to match its label.

Circle the phrase that would make the statement true.





# Check your work by comparing answers with your partner.





Look at Problem 1.

Which shaded part is greater, or larger?

Is this true for your other problems?

Is one half of a shape always larger than one fourth of the same shape?



If you want more pieces, should you cut your shape into halves or quarters?

If you want larger pieces, should you cut your shape into halves or quarters?

Explain your thinking.



Why does cutting something into fourths make the equal parts smaller than cutting it into halves?

Let's think about the first question I asked you today.

Would you rather have one half of a yummy pizza or one quarter of a yummy pizza?

Explain your thinking.



Look at the Application Problem.

Share your drawing with your partner.

Did you cut your brownie into quarters in the same way or in a different way?

How did you make sure you created four equal parts?



Turn to your partner and share what you learned in today's lesson.

What did you get really good at today?



### Exit Ticket



2. Explain your answers using the circles below.

