Eureka Math

4th Grade
Module 6
Lesson 5

At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Customize this Slideshow
Reflecting your Teaching Style and Learning Needs of Your Students

- ➤ When the Google Slides presentation is opened, it will look like Screen A.
- ➤ Click on the "pop-out" button in the upper right hand corner to change the view.
- ➤ The view now looks like Screen B.
- ➤ Within Google Slides (not Chrome), choose FILE.
- ➤ Choose MAKE A COPY and rename your presentation.
- ➤ Google Slides will open your renamed presentation.
- ➤ It is now editable & housed in MY DRIVE.

Icons

RDW — Read, Draw, Write

Learning Target

Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share

Whole Class

Individual

Partner

Small Group

Small Group Time

Lesson 5

Objective: Model the equivalence of tenths and hundredths using the area model and place value disks.

Suggested Lesson Structure

- Fluency Practice   (12 minutes)
- Application Problem   (6 minutes)
- Concept Development   (32 minutes)
- Student Debrief   (10 minutes)

Total Time   (60 minutes)
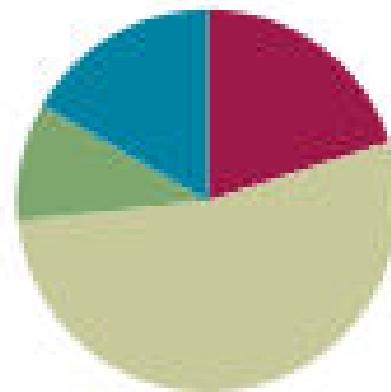
I can model the equivalence of tenths and hundredths using the area model and place value disks.

Divide by 10

100 = 10 ___

100 is the same as 10 of what unit?

Write the number sentence.

Divide by 10

10 = 10 ___

10 is the same as 10 of what unit?

Write the number sentence.

Divide by 10

1 = 10 ___

1 is the same as 10 of what unit?

Write the number sentence.

Divide by 10

1/10 = 10 ___

1/10 is the same as 10 of what unit?

Write the number sentence.

Write the Decimal or Fraction

1/100

Say the fraction.

1/100 = __.__

Complete the number sentence.

Write the Decimal or Fraction

2/100

Say the fraction.

2/100 = __.__

Complete the number sentence.

Write the Decimal or Fraction

3/100

Say the fraction.

3/100 = __.__

Complete the number sentence.

Write the Decimal or Fraction

7/100

Say the fraction.

7/100 = __.__

Complete the number sentence.

Write the Decimal or Fraction

17/100

Say the fraction.

17/100 = __.__

Complete the number sentence.

Write the Decimal or Fraction

17/100 = 10/100 +   /100 = 0.17

Complete the number sentence.

Write the Decimal or Fraction

13/100 = 10/100 +   /100 = 0.13

Complete the number sentence.

Write the Decimal or Fraction

19/100 = 10/100 +   /100 = 0.19

Complete the number sentence.

Write the Decimal or Fraction

0.05 = ____

Complete the number sentence.

0.15 = ____

Complete the number sentence.

Write the Decimal or Fraction

0.03 = ____

Complete the number sentence.

0.13 = ____

Complete the number sentence.

Write the Decimal or Fraction

100/100

Say the fraction.

Complete the number sentence, writing 100 hundredths as a whole number.

Count by Tenths and Hundredths

1 is the same as how many tenths?

Let's count to 10 tenths. When you come to 1, say 1.

Count by hundredths to 10 hundredths, starting at 0 hundredths.

10 hundredths is the same as 1 of what unit?

Count by Tenths and Hundredths

Let's count to 10 hundredths again. This time, when you come to 1 tenth, say 1 tenth.

Count by hundredths again. This time, when I raise my hand, stop.

Say 4 hundredths using digits.

Continue.

Count by Tenths and Hundredths

Say 8 hundredths using digits.

Continue.

Count backward by hundredths starting at 1 tenth.

RDW Read Draw Write

Read the problem.

Draw and Label.

Write a number sentence.

Write a word sentence.

Application Problem

The perimeter of a square measures 0.48 m. What is the measure of each side length in centimeters?

RDW

Simplify hundredths by division

We can show the equivalence of 10 hundredths and 1 tenth in the same way we showed the equivalence of 2 fourths and 1 half by using division.

Shade 1 tenth of the first areal model.

Next, shade 10 hundredths on the second area model.

Label each area model. What do you notice?

Simplify hundredths by division

1/10 = 10/100

Write the equivalent statement using decimals.

Show in the next area models how many tenths are equal to 30 hundredths. Write two equivalent statements using fractions and decimals.

Let's show those as equivalent fractions using division.

Simplify hundredths by division

$$\frac{10}{100} = \frac{10 \div 10}{100 \div 10} = \frac{1}{10}.$$
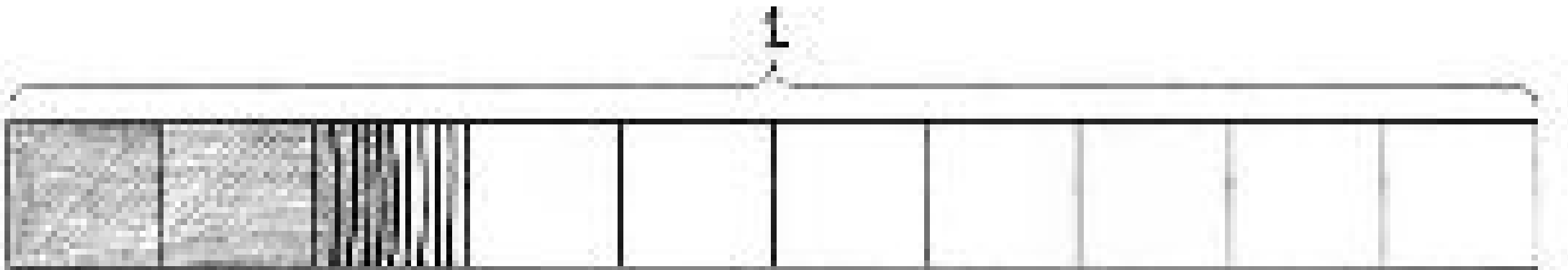
Why did I divide by 10?

Simplify hundredths by division

With your partner, use multiplication to find how many hundredths are in 3 tenths.

Is there a pattern as you find equivalent fractions for tenths and hundredths?
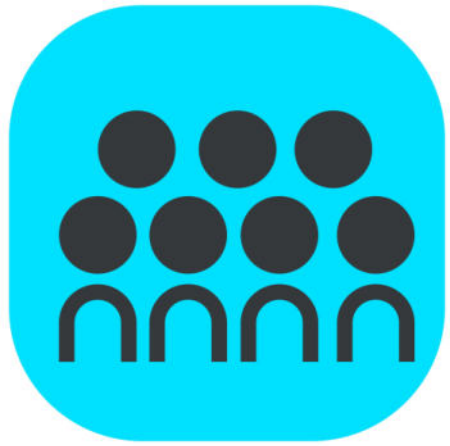
Model Hundredths

Say the fractional part that is shaded.

Say it as a decimal number.

Yes. Both the fraction and decimal number represent the same amount. What is different is the way that they are written. Write 25 hundredths as a fraction and then as a decimal number.

Model Hundredths

Just as we can express 25 hundredths in different ways when we write it, we can also represent it in different ways pictorially, just like we did with tenths and other fractions from Module 5.

How can we shade 25/100?

Yes. Decimals like this are just fractions. We are doing exactly the same thing, but we are writing the number in a different way. Go ahead and make the hundredths.
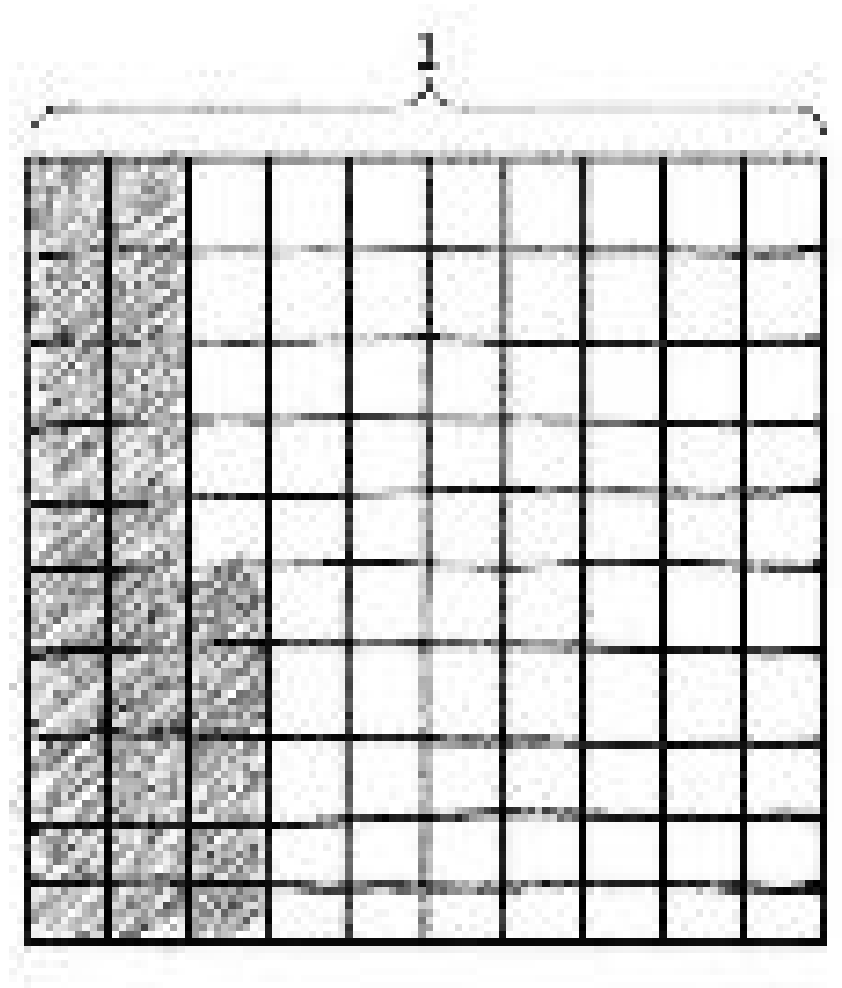
Model Hundredths

Shade 25/100.

What is a shortcut for shading 25 hundredths?

In total, how many tenths are shaded?

Both are correct: 2 complete tenths are shaded, and another half of a tenth is shaded. In total, how many hundredths are shaded?

Compose Hundredths to Tenths

Look at the area model we just drew. 1 tenth equals how many hundredths?

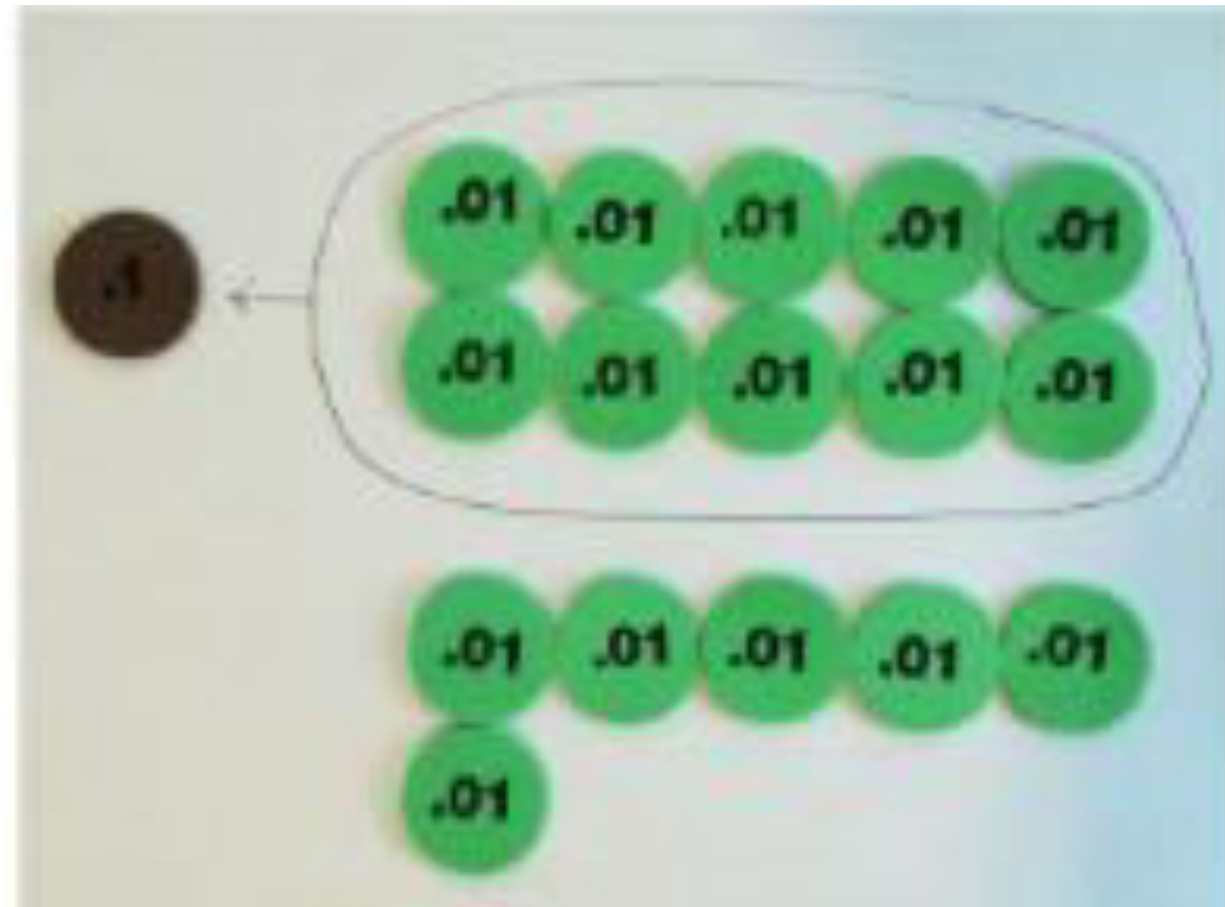Write it in decimal form.

Compose Hundredths to Tenths

What is the value of each disk? How can you tell?

How many hundredths are there?

Can we make a tenth? Talk to your partner.

Circle 10 hundredths to show 1 tenth. What is represented now?

16 hundredths can be represented as 1 tenth and 6 hundredths.
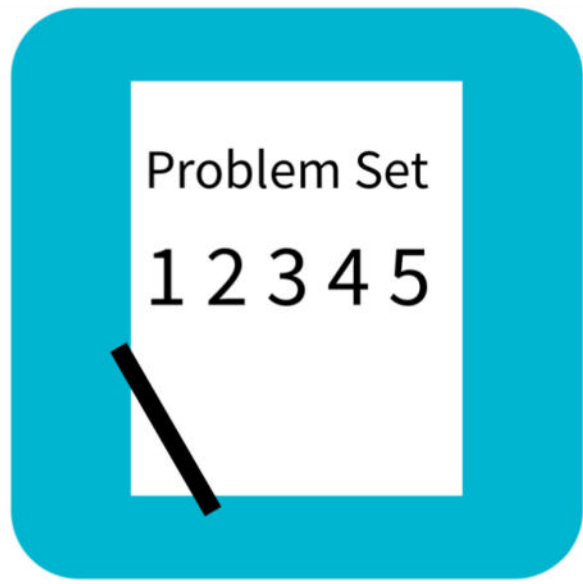
Equivalent Decimals

5/100

Draw place value disks to represent this fraction.

Say it in unit form.

Write it as a decimal. Be careful that your decimal notation shows hundredths.

Draw place value disks to represent this fraction.

Say the fraction in unit form, and write it as a decimal.
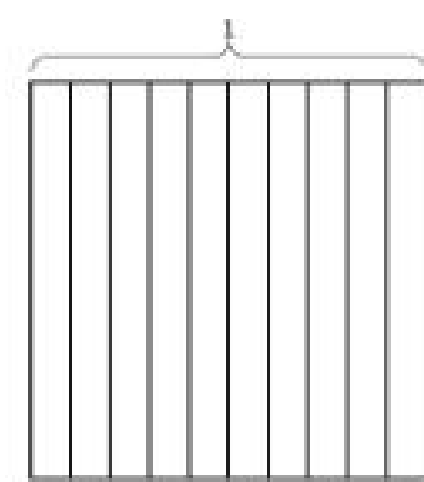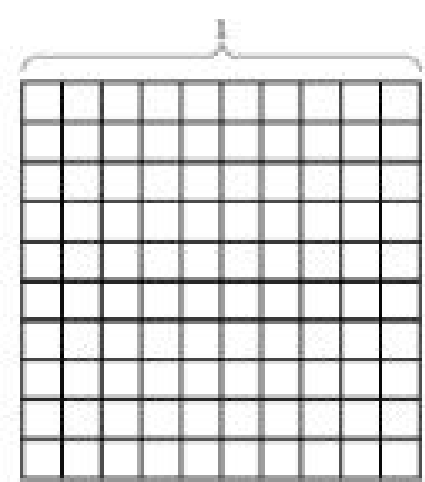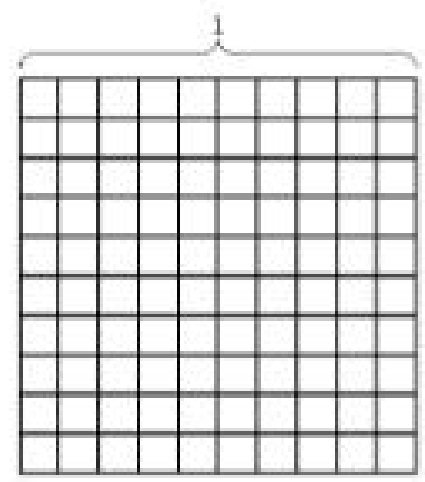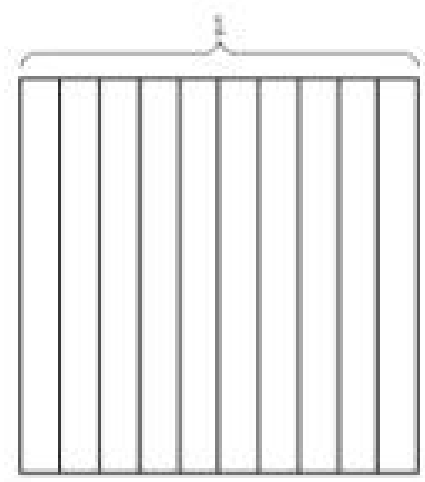
Problem Set

1 2 3 4 5

Problem Set

Name _____   Date _____

1. Find the equivalent fraction using multiplication or division. Shade the area models to show the equivalency. Record it as a decimal.

a. $\dfrac{3 \times}{10 \times} = \dfrac{}{100}$ b. $\dfrac{50 \div}{100 \div} = \dfrac{}{10}$
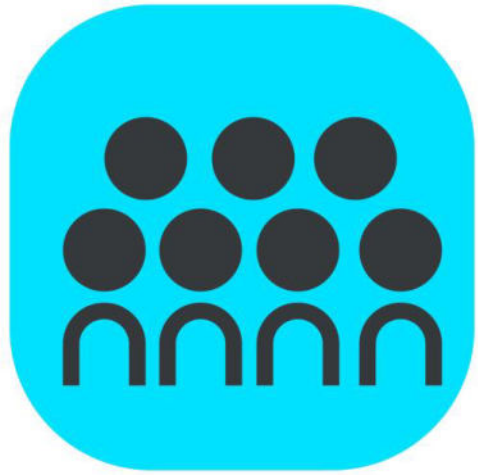

2. Complete the number sentences. Shade the equivalent amount on the area model, drawing horizontal

Debrief

Participate in the discussion by...

- Thinking about the question.
- Sharing your work.
- Explaining your strategy.
- Listening to others.

Debrief

How does solving Problem 1(a) help you solve Problem 2(a)?

In Problem 3(a), how does circling groups of 10 hundredths help you find how many tenths are in the number?

How is exchanging 10 hundredths for 1 tenth like exchanging 10 tens for 1 hundred? How is it different?

Exit Ticket

Name _____ Date _____

Use both tenths and hundredths place value disks to represent each fraction. Write the equivalent decimal, and fill in the blanks to represent each in unit form.

1. $\dfrac{7}{100}$ = 0._____

_____ hundredths