Eureka Math

4th Grade
Module 6
Lesson 12

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.

Icons

 Read, Draw, Write

 Learning Target

 Personal White Board

 Problem Set

 Manipulatives Needed

 Fluency

 Think Pair Share

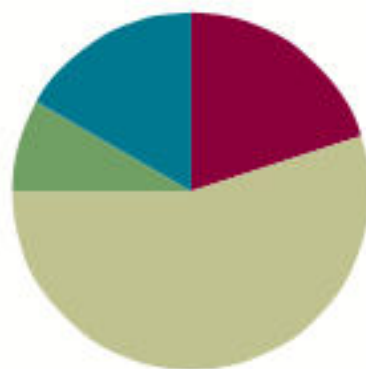 Whole Class

 Individual

 Partner

 Small Group

 Small Group Time

Lesson 12

Objective: Apply understanding of fraction equivalence to add tenths and hundredths.

Suggested Lesson Structure

■ Fluency Practice	(12 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(33 minutes)
■ Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

Apply understanding of fraction equivalence to add tenths and hundredths.

Add and Subtract

473 thousands 379 ones plus 473 thousands 379 ones

Solve using the standard algorithm.

384 thousands 917 ones plus 384 thousands 917 ones

Solve using the standard algorithm.

700 thousands 1 ten minus 199 thousands 856 ones

Subtract using the standard algorithm.

900 thousands 8 tens minus 288 thousands 99 ones

Subtract using the standard algorithm.

Compare Decimal Numbers

3.20 ___ 3.2   Complete the number sentence using <, >, or =

7.8 ___ 7.85

5.72 ___ 5.27

2.9 ___ 2.89

6.24 ___ 6.42

10.8 ___ 10.08

14.39 ___ 14.9
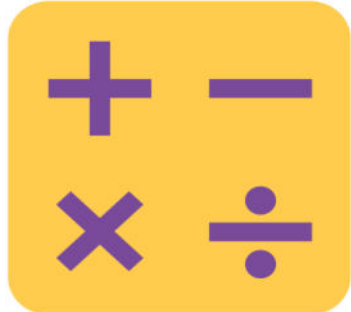
Order Decimal Numbers

0.3 0.44 $\dfrac{1}{10}$ Arrange the numbers in order from least to greatest.

$\dfrac{43}{100}$ $\dfrac{1}{100}$ $\dfrac{13}{10}$ 0.54 0.1 0.55 0.66

Arrange the numbers in order from least to greatest.

$\dfrac{93}{10}$ $\dfrac{39}{100}$ $\dfrac{390}{100}$ 3 ones 9 hundredths   30 and 9 tenths   3.93

Arrange the numbers in order from least to greatest.

Application Problem

On Monday, $1\frac{7}{8}$ inches of rain fell. On Tuesday, it rained $\frac{1}{4}$ inch. What was the total rainfall for the two days?

Add tenths and hundredths written in unit form using pictorial models

What is 3 girls + 2 girls?   *5 girls*

What is 3 girls + 2 students?   *We can't add girls and students, the units don't match.*

What if the girls are also students? Tell me the new number sentence, renaming to make like units.

3 students + 2 students = 5 students

What is 3 fourths + 2 fourths?   *5 fourths*

What is 3 fourths + 2 halves?

How do we solve this problem? Discuss and solve.

Add tenths and hundredths written in unit form using pictorial models

3 tenths + 4 tenths is ____?   *7 tenths*

3 tenths + 4 hundredths is ____ ?

How do we solve this problem? Create like units and solve with your partner.
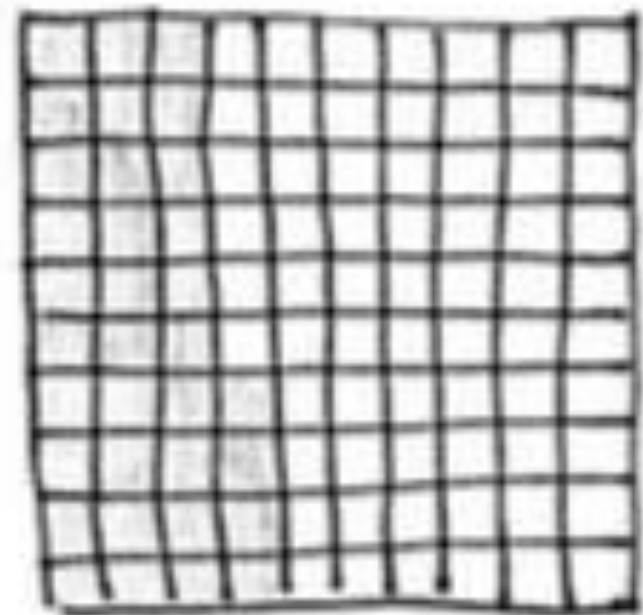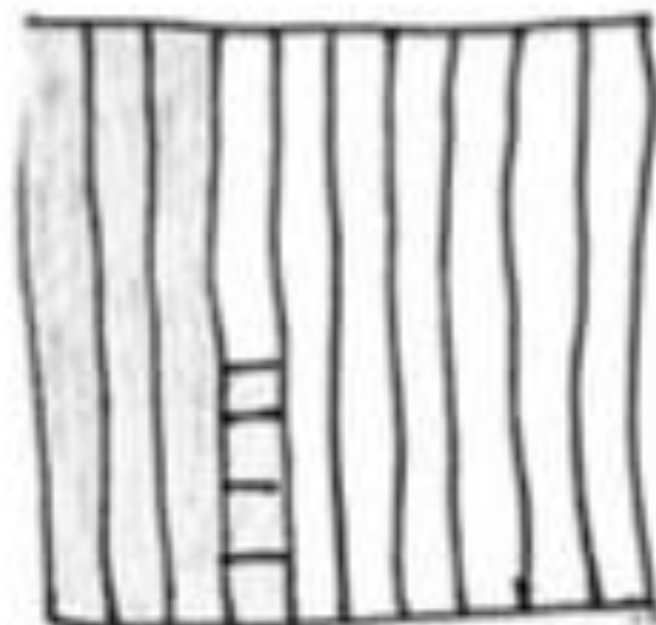
Is this true?
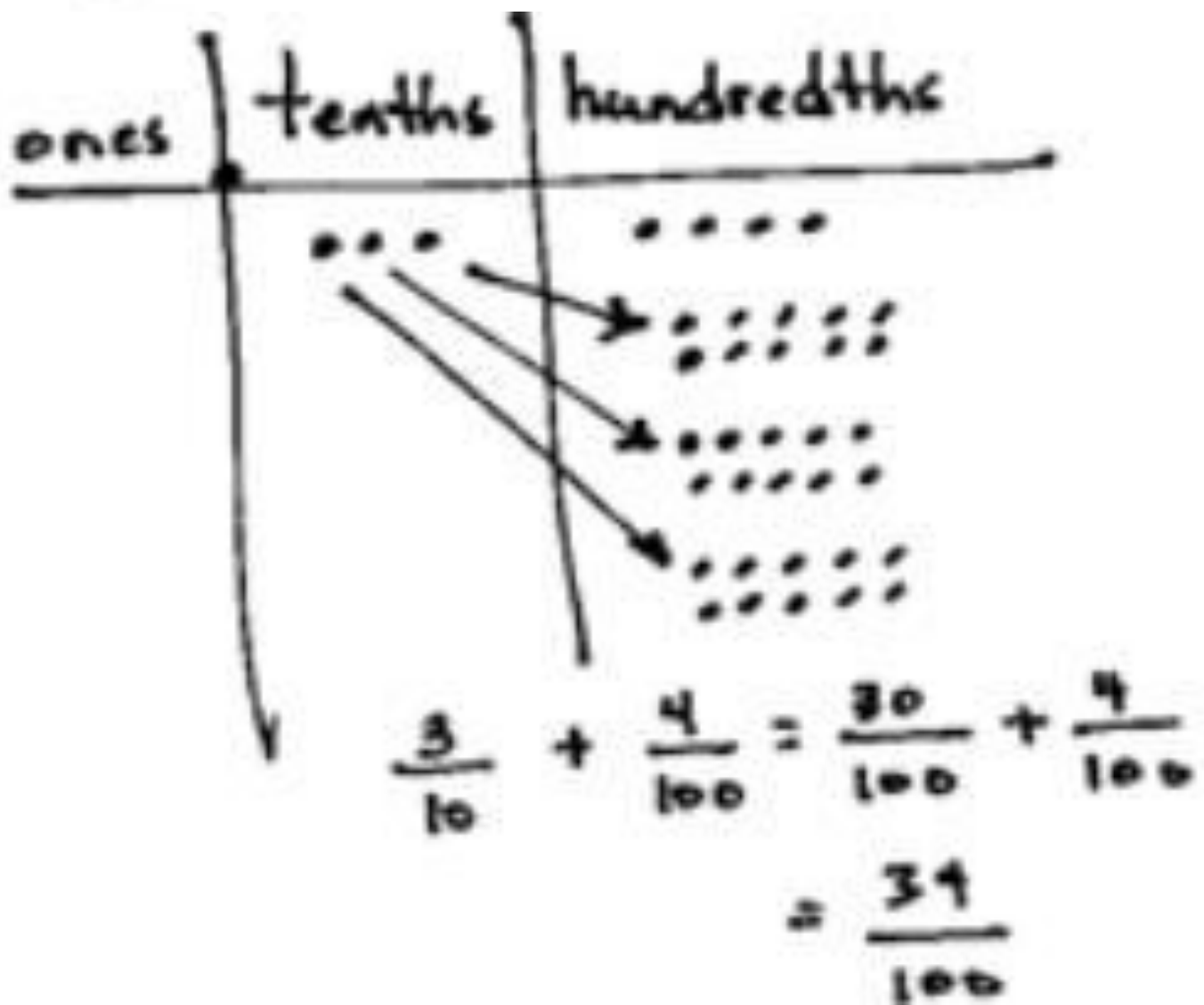Explain.   3 tenths + 4 hundredths = 30 hundredths + 4 hundredths

Model the addition using an area model or place value chart.
Show the conversion of tenths to hundredths.
Discuss with your partner.

$$\frac{3}{10} + \frac{4}{100} = \frac{30}{100} + \frac{4}{100} = \frac{34}{100}$$

$$\frac{3}{10} + \frac{4}{100} = \frac{30}{100} + \frac{4}{100}$$

$$= \frac{34}{100}$$

Add tenths and hundredths by converting using multiplication. Express the sum as a decimal.

$$\frac{3}{10} + \frac{13}{100}$$

Are we ready to add?

How can we solve using multiplication to make like units?

$$\frac{3}{10} = \frac{3 \times 10}{10 \times 10} = \frac{30}{100} \qquad \frac{30}{100} + \frac{13}{100} = \frac{43}{100}$$

Is this true?
Explain.

$$\frac{3}{10} + \frac{13}{100} = \frac{30}{100} + \frac{13}{100} = \frac{43}{100} = 0.43$$

Add tenths and hundredths with sums greater than 1. Express the sum as a decimal.

$$\frac{6}{10} + \frac{57}{100}$$

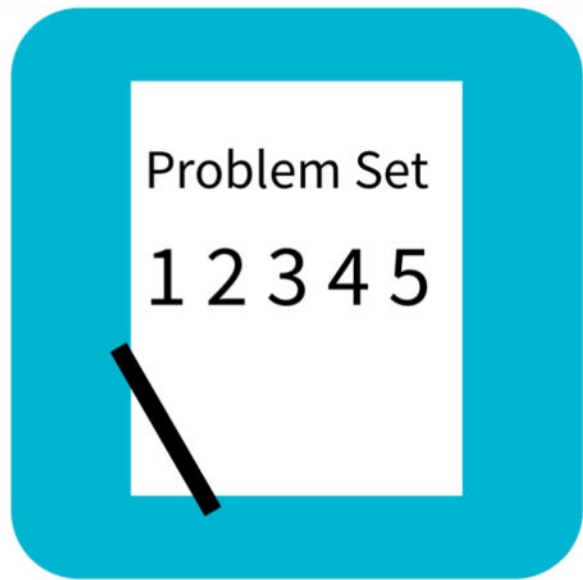Solve. Share your solution with your partner.

Look at these two strategies.

How is your strategy similar? Different?

$$\frac{6}{10} + \frac{57}{100} = \frac{60}{100} + \frac{57}{100} = 1\frac{17}{100} = 1.17$$

$$\frac{10}{100} \quad \frac{50}{100} \quad \frac{50}{100} \quad \frac{7}{100}$$

$$\frac{6}{10} + \frac{57}{100} = \frac{60}{100} + \frac{57}{100} = \frac{117}{100} = 1\frac{17}{100} = 1.17$$

$$\frac{100}{100} \quad \frac{17}{100}$$
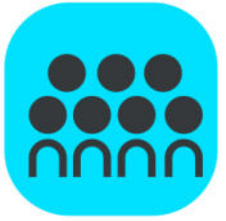
Name _____   Date _____

1. Complete the number sentence by expressing each part using hundredths. Model using the place value chart, as shown in part (a).

ones		tenths	hundredths
	●		• • • • •
			• • • • •
			• • • • •

a.   1 tenth + 5 hundredths = _____ hundredths

ones		tenths	hundredths
	●		

b.   2 tenths + 1 hundredth = _____ hundredths

Debrief

- How did the work in Problem 1 help to prepare you to solve Problem 2?

- In Problem 3(d), what do you notice about your answer? Can the answer be written using a unit other than hundredths? Does that apply to any solutions in Problem 4?

- In Problem 5, if the water and iodine are mixed together, can we just measure the amount of iodine in the large beaker? Explain.

- What have we learned before that made converting to like units so easy? What have we learned before that made adding tenths and hundredths so easy?

- How did the Application Problem connect to today's lesson?

Exit Ticket

Name _____   Date _____

1. Complete the number sentence by expressing each part using hundredths. Use the place value chart to model.

ones	●	tenths	hundredths

1 tenth + 9 hundredths = _____ hundredths