Eureka Math

4th Grade
Module 6
Lesson 9

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!

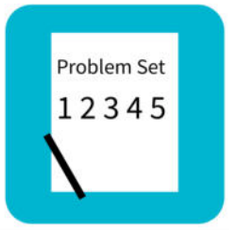
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

Learning Target

Personal White Board

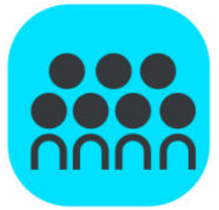


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

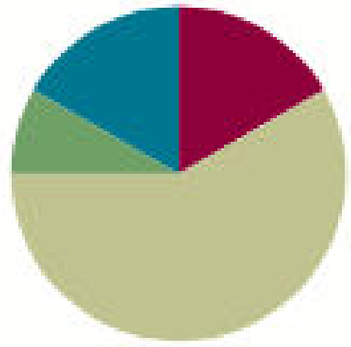
Small Group Time

Lesson 9

Objective: Use the place value chart and metric measurement to compare decimals and answer comparison questions.

Suggested Lesson Structure

Fluency Practice	(10 minutes)
Application Problem	(5 minutes)
Concept Development	(35 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



Materials: (T) 2 meter sticks, 2 rolls of different color masking tape (e.g., yellow and blue), metric scale, 4 graduated cylinders, bags of rice, water, food coloring, document camera (S) Personal white board, measurement record (Template)

I can use the place value chart and metric measurement to compare decimals and answer comparison questions.

Decompose larger units

On your place value charts draw 1 one.

1 one=_____tenths. Show how many tenths are in 1 one on your place value chart.

Rename the following:
1one 2 tenths as ONLY tenths
1 tenth for hundredths
1 tenth 2 hundredths as ONLY hundredths

Decimal fraction equivalence

Write the equivalence as a fraction and greater than one.

2.3=_____=_____

4.23=_____=_____

10.7=_____=_____

30.52=_____=_____

Rename the decimal

Write the decimal as a mixed number.

3.1

9.8

10.4

64.3

Application Problem

Kelly's dog weighs 14 kilograms 24 grams. Mary's dog weighs 14 kilograms 205 grams. Hae Jung's dog weighs 4,720 grams.

Compare decimals

Hold and display a meter stick! Walk around the room and students look at it.

Ask what is the length of the meter stick as a fraction and decimal.

On your tape diagram let’s represent the length of the yellow tape.

Compare Decimals

Hold and display the other meter stick! Walk around the room and students look at it.

Ask what is the length of the meter stick as a fraction and decimal.

On your tape diagram let’s represent the length of the blue tape.

Compare Decimals

Let’s compare the two meter sticks.

Use the words longer than to compare.

_____ is longer than _____.

Work with your partner and place these two numbers on your place value chart.

ones	●	tenths	hundredths
0	.	6	7
0	.	5	9

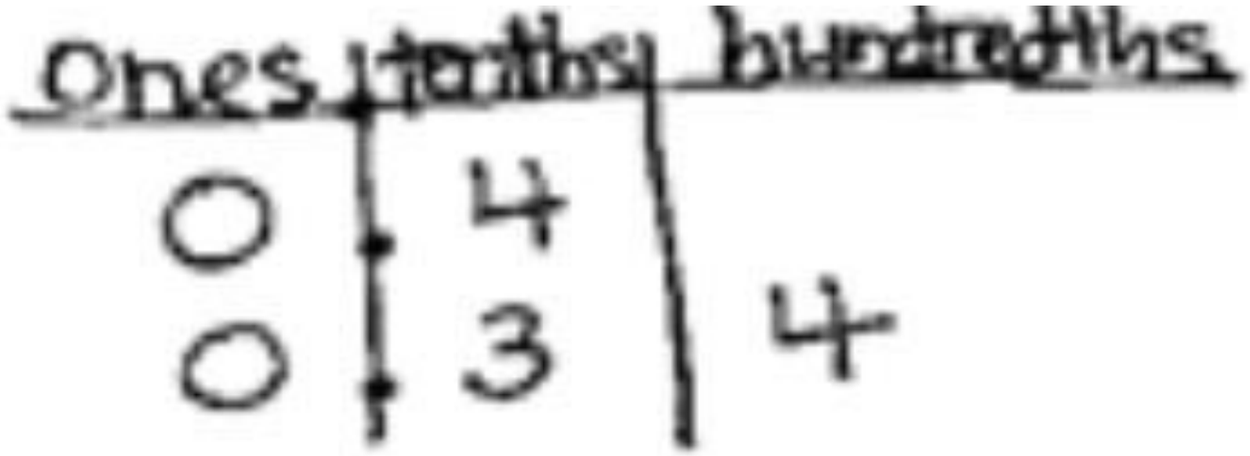
Compare decimals

Remove some tape from the meter sticks.

Show the students the new meter sticks and have them represent each meter stick on a new tape diagram.

Now, place it on a place value chart.

What do you notice about these numbers?



Compare decimals

Before class I measured some bags of rice. Here is what each bag weighed.

I need to put the bags in order from heaviest to lightest, but I need your help.

Work with your groups to put them in order

Mass of Rice Bags (kilograms)

Rice Bag	ones	.	tenths	hundredths
A	0	.	1	0
B	0	.	6	5
C	0	.	7	
D	0	.	4	6

Compare decimals

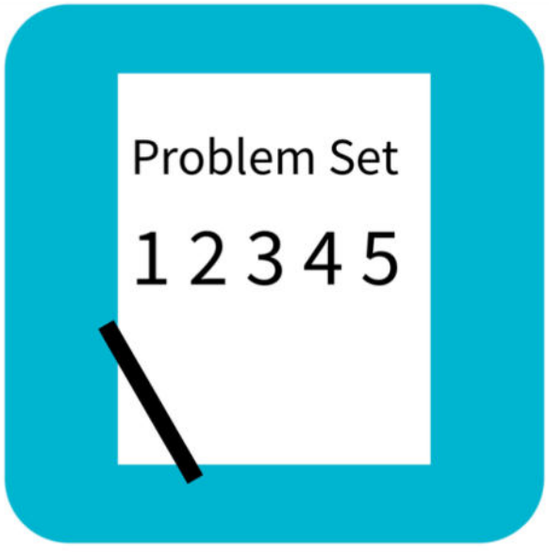
Before class I measured some beakers of water. Here is the amount of liquid each beaker held.

I need to put the beakers in order from which one help least amount of liquid to which one held the most.

Work with your groups to put them in order

Volume of Liquid (liters)

Cylinder	ones	.	tenths	hundredths
A	0	.	3	
B	0	.	1	5
C	0	.	2	9
D	0	.	0	9

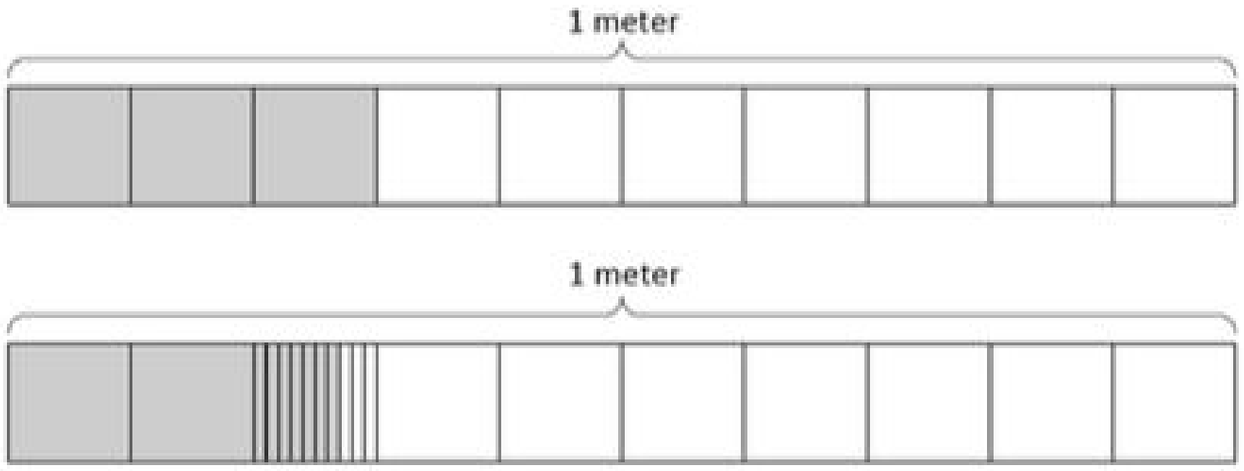


Problem Set

Name _____ Date _____

1. Express the lengths of the shaded parts in decimal form. Write a sentence that compares the two lengths. Use the expression *shorter than* or *longer than* in your sentence.

a.



Debrief

- How do the tape diagrams in Problem 1 support your statements? Make a statement comparing a length from part (a) to a length from part (b).
- Share one of your statements for Problem 2(c). Explain your reasoning.
- How did the place value chart help to compare and order the different measurements in Problem 3?
- How is comparing decimal measurements of length, mass, and volume similar? How is it different?
- How did the Application Problem connect to today's lesson?

Exit Ticket

Name _____ Date _____

1. a. Doug measures the lengths of three strings and shades tape diagrams to represent the length of each string as show below. Express, in decimal form, the length of each string.