Decimals and Fractions: Interactive Lesson
Grade 3 & 4

Objective: Students will use base 10 models and number lines to recognize that decimals and fractions are both a way to represent part of a whole.

Preparation: Copies of Guided Practice Template, precut matching activity (enough for students to work in pairs), copies of the blank sort (optional).

Introduction: Allow students to *Think, Pair, Share* situations in which we use fractions in daily life. Make a quick chart noting the responses. Continue with fractions and percents in the same manner. Make the connection for them if they don't recognize that these are all ways to represent a part of a whole (i.e , change is a decimal representation for a part of a dollar, on tests we sometimes see our score written as a fraction).

"We Do #1"
Using the Guided Practice Template guiding students to recognize that the whole has been divided into 100 equal parts.
MODEL: Shade in forty-two-hundredths of the whole, reminding students that the numerator is what has been shaded and the denominator is how many parts are in the whole.
FRACTION: Use the model and prior discussion of model to identify the fraction that represents what has been shaded and the correct way to read the fraction, "Forty-two-hundredths."
DECIMAL: Have students draw a place value chart as shown below:

_____	_____	.	_____	_____
tens	ones		$\frac{1}{10}$	$\frac{1}{100}$

Remind students that tenths and hundredths can be thought of as dimes and pennies.

Think, Pair, Share We know that a fraction and a decimal is read the same way does this and the place value chart help us to know how to write the decimal?
NUMBER LINE: Plot the value on the number line as a decimal and a fraction.

"We Do #2"
Using strategy outlined above to shade in four-tenths of a whole.

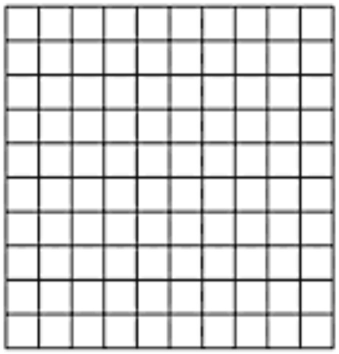
You Do #1
Verbally ask students to show eighty-two hundredths as a fraction, decimal, model and on number line.

Interactive Activity- Provide pairs of students with the precut match that follows. Students will find the equivalent fraction, decimal, model and number line.

Extended the Activity- Provide students with blank copies of the match. Have them make their own match for fellow classmates to practice.
AND/OR Have students write a word problem that can be modeled by examples given in the match or the ones they made on their own.
AND/OR Add mixed numbers to the activity.

Fractions and Decimals

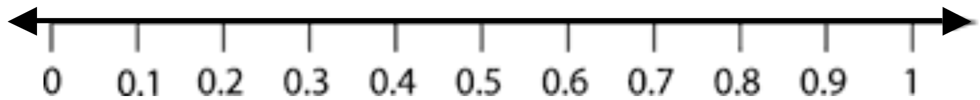
Model:



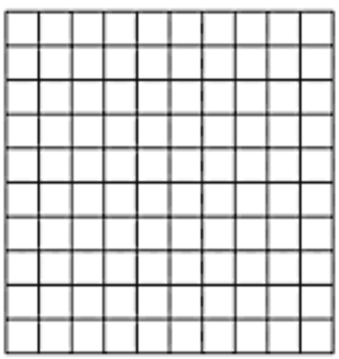
Fraction:

Decimal:

Number Line:



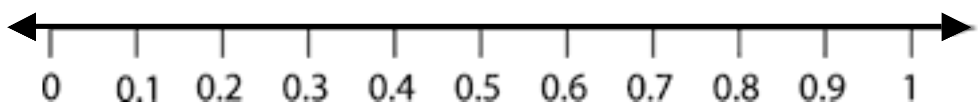
Model:



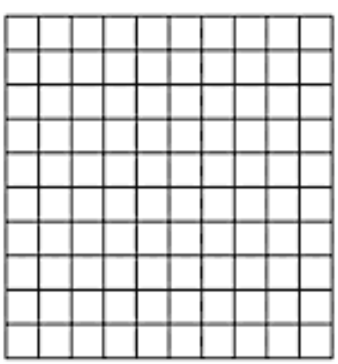
Fraction:

Decimal:

Number Line:



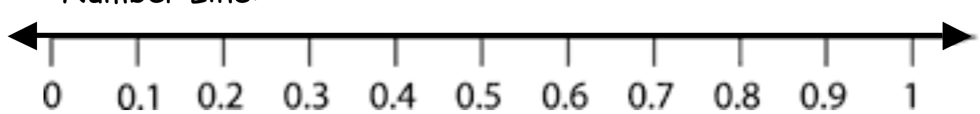
Model:



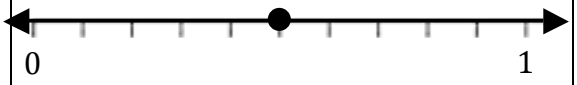
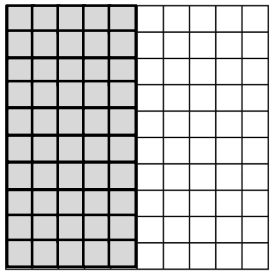
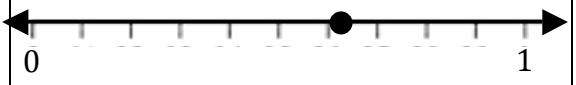
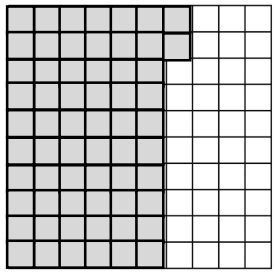
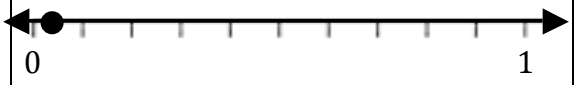
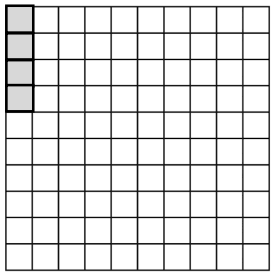
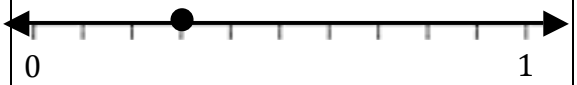
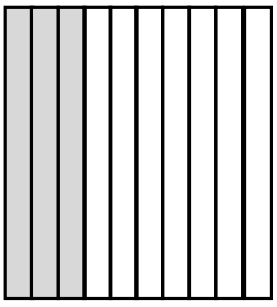
Fraction:

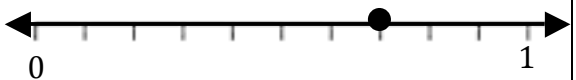
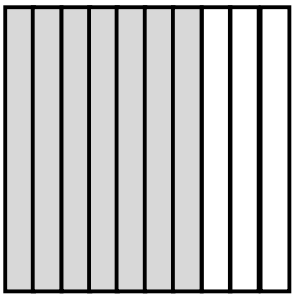
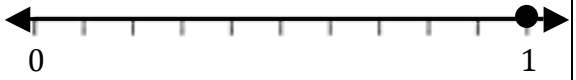
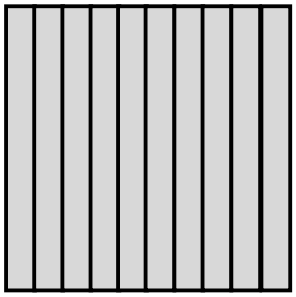
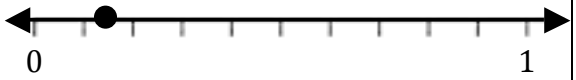
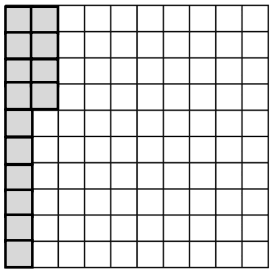
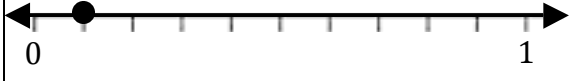
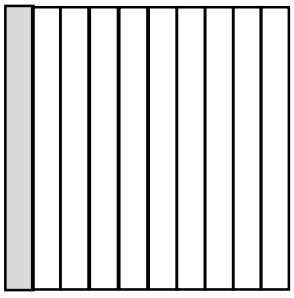
Decimal:

Number Line:



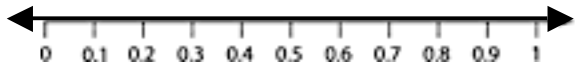
Cut for match

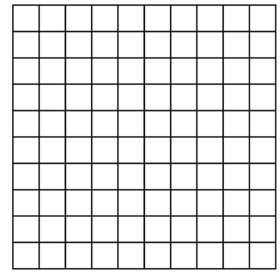
$\frac{50}{100}$	.50		
$\frac{62}{100}$	.62		
$\frac{4}{100}$	.04		
$\frac{3}{10}$	.3		

$\frac{7}{10}$	.7		
$\frac{10}{10}$	1.0		
$\frac{14}{100}$	.14		
$\frac{1}{10}$	.1		

Create Your Own Sort

______ .





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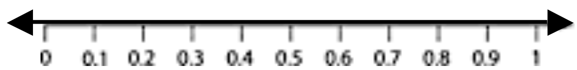

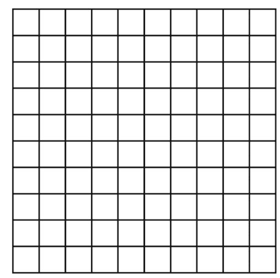

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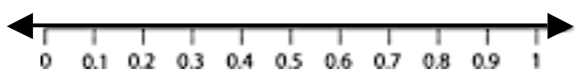

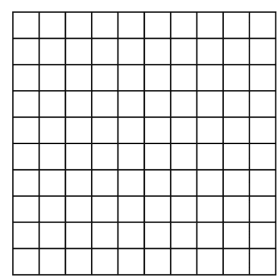

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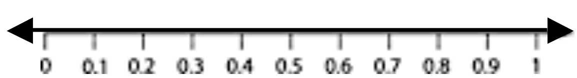
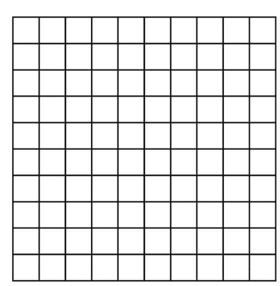
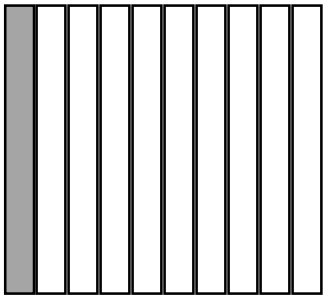
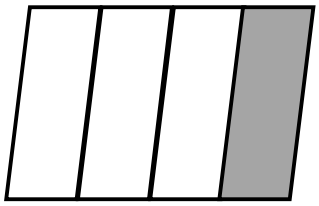




Date _____

Warm-Up

CST Grade 3 #10	Review:
Donna shaded $\frac{1}{10}$ of the figure.  **Which decimal equals $\frac{1}{10}$?** **A** 0.01 **B** 0.1 **C** 0.110 **D** 1.0	Use basic facts to help solve: 24 ÷ 8 = 240 ÷ 8 = 2,400 ÷ 8 = 24,000 ÷ 8 = 240,000 ÷ 8 = 2,400,000 ÷ 8 =
Current:	**Other**
What fraction of the figure below is shaded ? 	Solve at least 2 ways: 8,016 – 639 =

Today's Objective/Standards: Decimals, Fractions, and Percents