

<b>Subject:</b> Mathematics	<b>Grade:</b> Four (4)	<b>Strand:</b> Number	<b>Duration:</b> 60 Minutes
<b>Topic:</b> Decimal – Hundredths		<b>Focus Question:</b> How do I know the value of a number?	
<b>Standard:</b>	Know the value of numerals, associate them with their names, numbers, ordinals and use concrete objects to model patterns, expressions and numbers.		
<b>Attainment Targets:</b>	Demonstrate the understanding of fraction ideas.		
<b>Benchmarks:</b>	Read and write number names for decimal fractions (tenths and hundredths)		
<b>Materials:</b>	Hundredths board/ Hundredths Grid		

### Specific Objectives

- *By the end of the lesson, students will be able to:*
  - make connections between decimal numbers and fractional numbers with denominator 10 or 100;
  - identify the place and actual value of digits in decimal numbers showing tenths and hundredths;
  - decompose decimal numbers in a variety of ways

### Prior Learning:

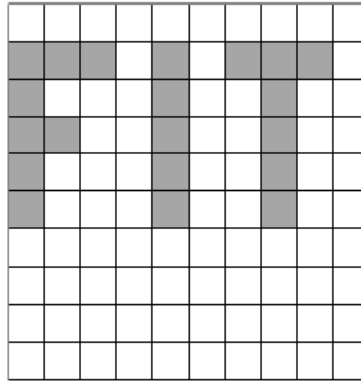
- *Students should already be able to:*
  - Distinguish between value, place value and face value of a number;
  - Explain the concept of reading and writing whole numbers;
  - Make connections between the decimal form of numbers and fractional numbers with a Denominator of 10;
  - Identify the place value of digits in decimal numbers showing tenths;

### Content Summary

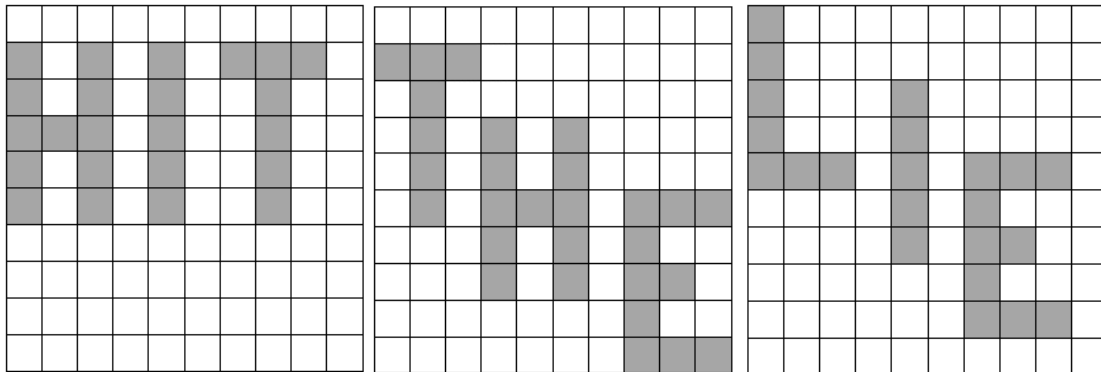
- A hundredth is one of 100 equal divisions of the whole. A whole is the same as 100 hundredths.
- If a tenth is divided into 10 equal parts, each part is called a hundredth and, therefore, 10 hundredths are the same as a tenth
- Decimal numbers can be written in a number of ways by renaming wholes as tenths, tenths as hundredths, etc.

### Engage

- Show students the hundredth board with the word FIT (if necessary, briefly introduce students to the hundredth board). Ask them to determine what fraction of the board is shaded. Encourage them to use language such as ‘20 out of 100 hundred parts’, etc.

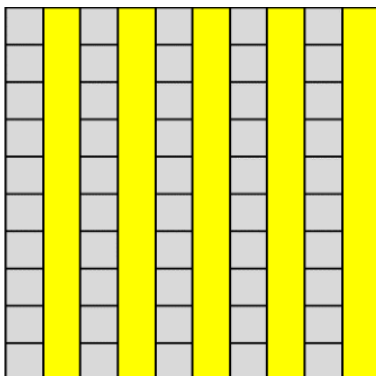


What fraction of each hundred board is taken up by words?



**Explore**

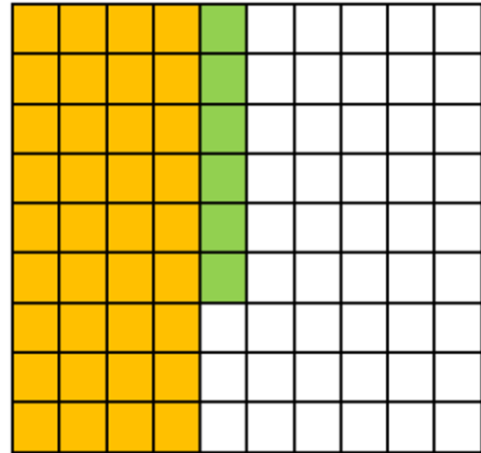
- Give each student a blank hundredth board. Explore how the hundredth board shows fractions by answering questions such as:
  - How many small squares are on the hundredth board?
  - What unit fraction is represented by each square on the hundredth board?
  - How would you show 7 hundredths on the hundredth board? What about 19 hundredths or 48 hundredths?
- Help students make connections between tenths and hundredths by exploring a hundredth board that shows both tenths and hundredths:



- Use the hundredth board to answer questions such as
  1. How many hundredths make a tenth?
  2. How many hundredths are in two tenths?
  3. How many tenths are in 30 hundredths?
  4. How many tenths are in 37 hundredths? Etc.

- Help students make connections among the various ways of representing decimal numbers showing hundredths.

- Show students a hundredth board in which 46 hundredths have been shaded
- Use the hundredth board to discuss the number of tenths and hundredths in 46 hundredths and explore alternative ways of describing 46 hundredths, for example as 4 tenths and 6 hundredths.
- Repeat this if necessary with other examples from the hundredth board

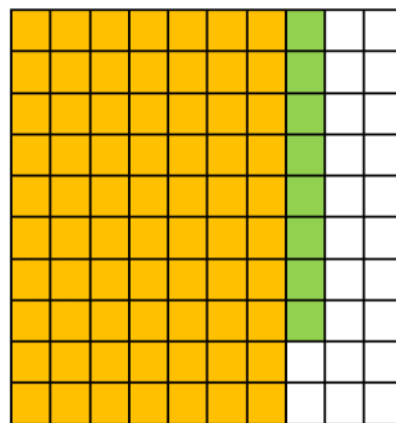
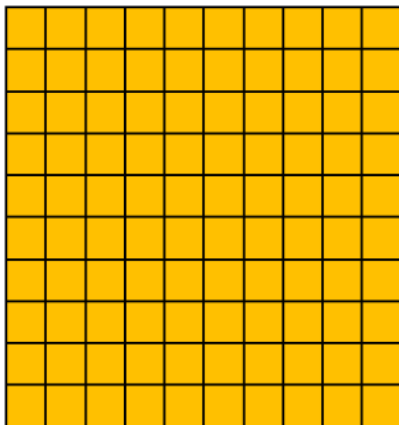


**Explain**

- Introduce students to the place value chart showing hundredths:

• Tens	Ones	.	Tenths ( $\frac{1}{10}$ )	Hundredths ( $\frac{1}{100}$ )
	1	.	7	8

- Discuss the value of each digit and associate each digit with the pictorial representation using the hundredth boards. If necessary, explore other numbers



- Allow students to use their base 10 pieces to explain why 1.78 has
  - 1 whole, 7 tenths and 8 hundredths
  - 17 tenths and 8 hundredths
  - 178 hundredths

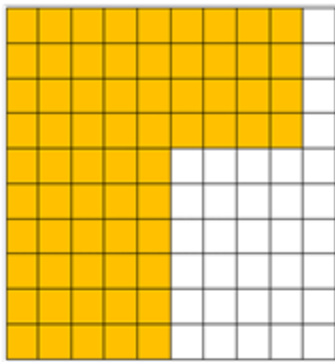
**Extension**

Illustrate how different notes and coins, (\$1 \$10, \$100, \$1000) explain the fractional relationship that exist among them.

**Evaluation**

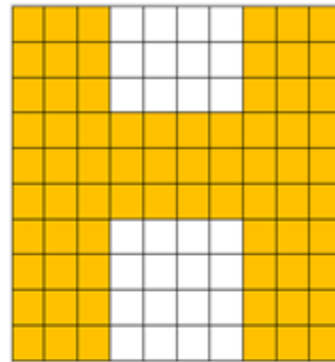
**Students' Evaluation**

1. Say what portion of each rectangle below is shaded. Use fractions and decimals to write your answers.



Fraction: \_\_\_\_\_

Decimal: \_\_\_\_\_



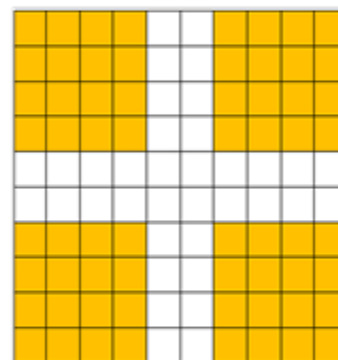
Fraction: \_\_\_\_\_

Decimal: \_\_\_\_\_



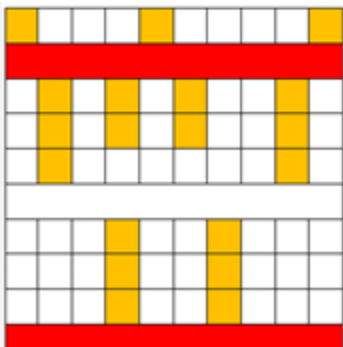
Fraction: \_\_\_\_\_

Decimal: \_\_\_\_\_



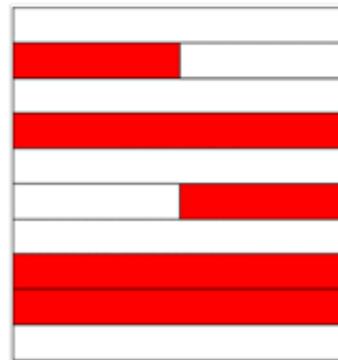
Fraction: \_\_\_\_\_

Decimal: \_\_\_\_\_



Fraction: \_\_\_\_\_

Decimal: \_\_\_\_\_

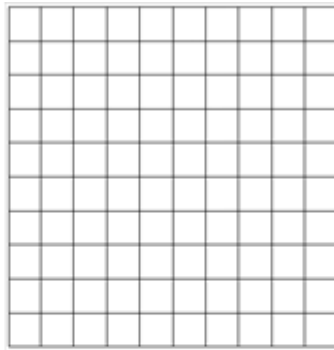
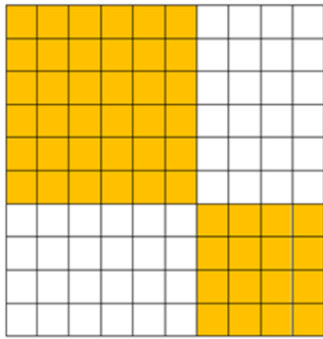


Fraction: \_\_\_\_\_

Decimal: \_\_\_\_\_

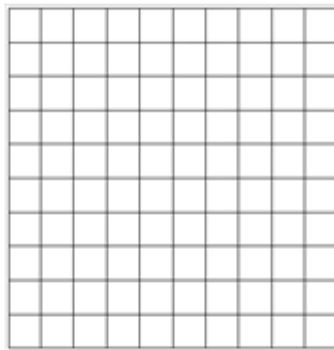
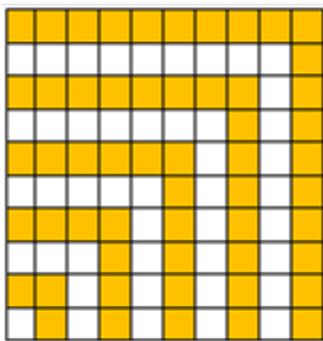
2. A decimal number is represented on the hundredth board on the left. Use the hundredth

board on the right to show the number of tenths and the number of hundredths shaded on the left. Use two different colours to shade. Write the number shaded in 3 different forms.



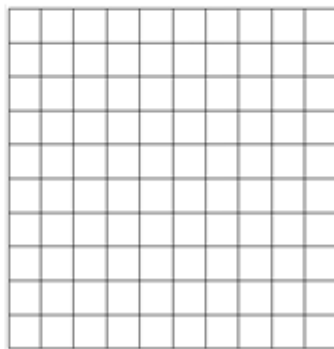
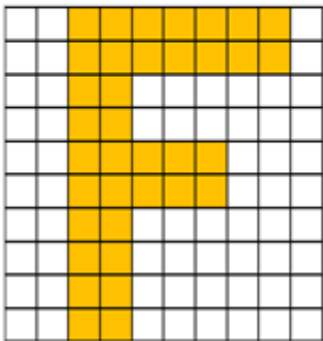
The number is

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_



The number is

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_



The number is

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_

**Teacher Evaluation**

<b>What percentage of students able to:</b>	<b>0% - 50%</b>	<b>51% - 80%</b>	<b>81% - 100%</b>
make connections between decimal numbers and fractional numbers with denominator 10 or 100			
identify the place and actual value of digits in decimal numbers showing <i>tenths</i> and <i>hundredths</i>			
decompose decimal numbers in a variety of ways			

**Comments:**

*Areas of strengths*

*Areas of weaknesses*

*Actions to be taken*