# MATH NEWS

## 4th Grade Unit 6

Volume 6

3rd 9 Weeks

### UNIT 6 GOALS:

- Use decimal notation for fractions with denominators of 10 and 100.
- Locate decimals on a number line.
- Compare decimals by reasoning about their size using >, <, or =.
- Express a fraction with denominator 10 as an equivalent fraction with denominator of 100, use this to add two fractions with respective denominators of 10 and 100.

## VOCABULARY

**Decimal point –** period used to separate the whole number part from the fractional part of a decimal number.

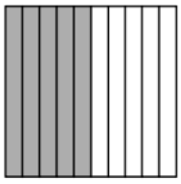
**Tenth** – the first digit to the right of the decimal point (10 out of 10 equal parts equals 1 whole).

**Hundredth** – the second digit to the right of the decimal point (100 out of 100 equal parts equals 1 whole).

**Decimal number –** number written using place value units that are powers of 10 such as tenths or hundredths.

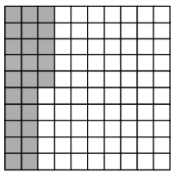
***Explore Tenths and Hundredths and write fractions as decimals.***

Students will use their understanding of fractions to explore tenths and hundredths.



In the example above, the area model is partitioned in 10 equal parts. Five of the parts are shaded. So that's 5 tenths.

$$\frac{5}{10} = 5 \text{ tenths} = 0.5$$

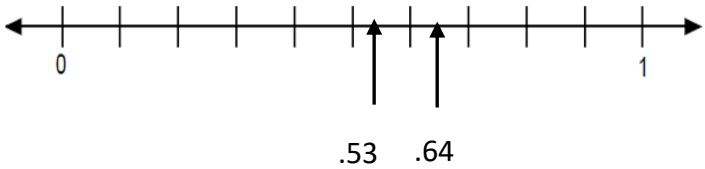


In the example above, the area model is partitioned into 100 equal parts. 25 of the parts are shaded, so that's 25 hundredths.

$$\frac{25}{100} = 25 \text{ hundredths} = 0.25$$

**Locating Decimals on a Number Line**

Students were asked to locate .53 and .64.




***Comparing Decimals and Fractions using tenths and hundredths***

Students will compare decimals and fractions using models of tenths and hundredths, as well as standard form.

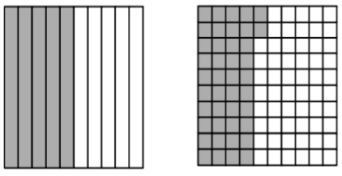
Consider the example below.

**Multiple ways to compare:**

**0.5 > 0.42**

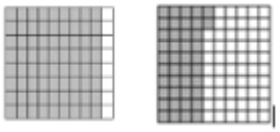
**5 tenths > 42 hundredths**

$$\frac{5}{10} > \frac{42}{100}$$



***Adding Fractions with denominators of 10 and 100.***

Shown below are the models for $\frac{9}{10}$ *and* $\frac{42}{100}$.



Student will express $\frac{9}{10}$ *as* $\frac{90}{100}$ to enable them to add the two fractions.

See example below:

$$\frac{9}{10} + \frac{42}{100}$$

$$\frac{9}{10} + \frac{42}{100} = \frac{90}{100} + \frac{42}{100} = \frac{132}{100} = 1.32$$

$\frac{9}{10}$ is renamed as $\frac{90}{100}$.

***Use the example above to add the following fractions. Express your answer in decimal notation if possible.***

1. $\frac{80}{100} + \frac{3}{10} =$

2. $\frac{6}{10} + \frac{3}{100}$

3. $\frac{7}{10} + \frac{53}{100}$

***Solve the following word problem. Express your final answer in decimal notation.***

Beaker A has $\frac{63}{100}$ liter of iodine. It is filled the rest of the way with water up to 1 liter. Beaker B has $\frac{4}{10}$ liter of iodine. It is filled the rest of the way with water up to 1 liter. If both beakers are emptied into a large beaker, how much iodine will be in the large beaker?

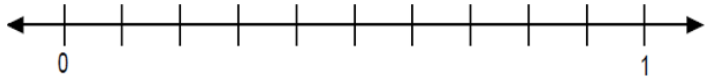
$\frac{4}{10} + \frac{63}{100} =$

***Express each number in decimal notation and locate each number on the number line below.***

1. $\frac{80}{100}$

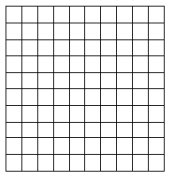
2. $\frac{6}{10}$

3. $\frac{53}{100}$

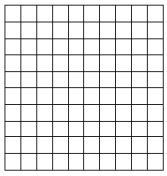



***Express each number in decimal notation and shade in a model to represent each.***

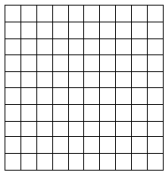
1. $\frac{80}{100}$



2. $\frac{6}{10}$



3. $\frac{53}{100}$



*Resource for Unit 6*