



# MATH NEWS



Grade 5, Module 1, Topic C

## 5<sup>th</sup> Grade Math

Module 1: Place Value and Decimal Fractions

### Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in the Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material taught in the classroom. Grade 5 Module 1 of Eureka Math (Engage New York) covers place value and decimal fractions. In Topic C students will use their knowledge of rounding whole numbers to rounding decimal numbers to any place.

**Topic C:** Place Value and Rounding Decimal Fractions

### Words to know

- Thousandths/Hundredths/Tenths
- Decompose
- Decimal Fraction

### Things to Remember!

*Vertical number lines promotes students' understanding of rounding in that numbers are quite literally rounded up and down to the nearest multiple rather than left or right as in a horizontal number line.*

**Decompose** – showing the different ways a number can be separated into the most of each place value unit

| tens | ones | tenths | hundredths |
|------|------|--------|------------|
| 5    | 2    | 9      |            |
|      | 52   | 9      |            |
|      |      | 529    |            |

52.9 = 5 tens 2 ones 9 tenths  
 52 ones 9 tenths  
 529 tenths

## OBJECTIVE OF TOPIC C

- Round a given decimal to any place using place value understanding and the vertical number line.

## Focus Area – Topic C

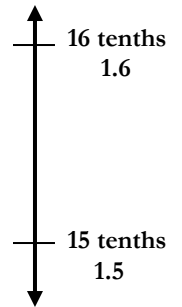
Place Value and Rounding Decimal Fractions

### Rounding 1.57 to the nearest tenth

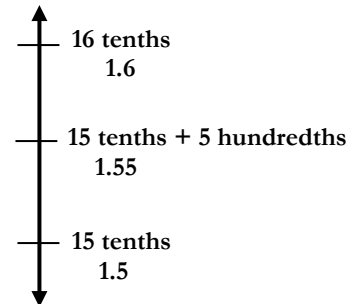
**Step 1:** Decompose 1.57 to show as many ones, tenths, and hundredths.

| tens | ones | tenths | hundredths |
|------|------|--------|------------|
|      | 1    | 5      | 7          |
|      |      | 15     | 7          |
|      |      |        | 157        |

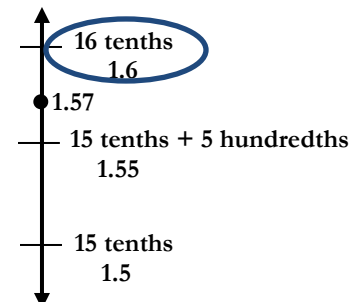
**Step 2:** Draw a vertical number line. Since we are going to round to the nearest tenth, we need to decide between which two tenths does 1.57 lie and indicate that on the vertical number line.



**Step 3:** Determine the halfway point or midpoint between 15 tenths and 16 tenths.



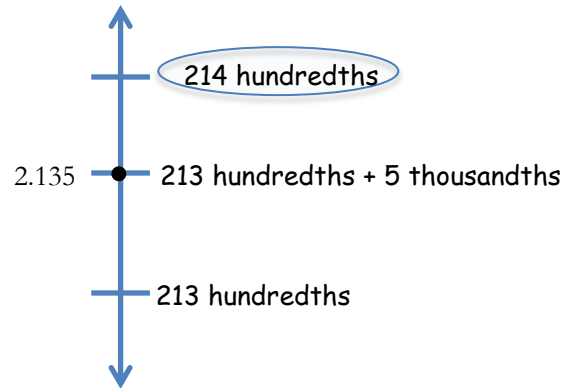
**Step 4:** Locate 1.57 on the number line. We can see that 1.57 is past the midpoint so 1.57 rounds to 16 tenths or 1.6.



*Application Problems and Answers*

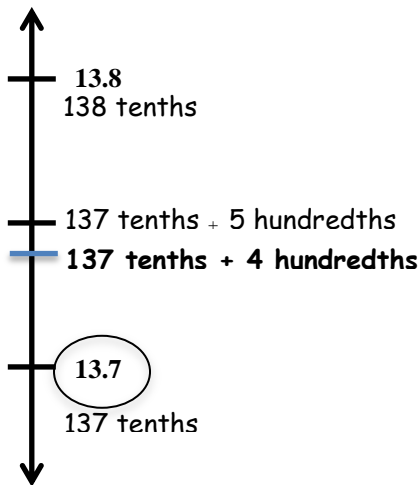
For open international competition, the throwing circle in the men's shot put must have a diameter of 2.135 meters. Round this number to the nearest hundredth to estimate the diameter. Use a number line to show your work.

| tens | ones | tenths | hundredths | thousandths |
|------|------|--------|------------|-------------|
|      | 2    | 1      | 3          | 5           |
|      |      | 21     | 3          | 5           |
|      |      |        | 213        | 5           |
|      |      |        |            | 2135        |



*The diameter is 2.14 meters.*

A decimal number has two digits to the right of its decimal point. If we round it to the nearest tenth, the result is 13.7. What is the **maximum** possible value of this number? Use words and the number line to explain your reasoning. Include the midpoint on your number line.



*The maximum possible value is 13.74. If the number was 13.75 it would round to 13.8.*