Dear Student and LC’s,

This week we will be working on writing an essay about decimals.

* Decimals are used in our every day life. Use the 10 steps to writing to write a 5 paragraph essay describing at least three ways that decimals are used in real life and explain why they are important to us.

The first paragraph is the thesis (which tells the reader what they are going to read about). The first paragraph will list 3 things that they will be talking about. Please make at least one thing is from the reading (How We Use Decimals Everyday and Don’t Even Realize It) and cite the reading in your paragraph. The next 3 paragraphs will be explaining each of the 3 important facts. The last paragraph is the closing statement.

Readings: **How We Use Decimals Everyday and Don't Even Realize It (unknown author)**

These are the deadlines (homework) for this week:

Monday: Write the thesis (in Padlet).

Tuesday: In class, we will write the thesis paragraph and closing paragraph due in Padlet.

Wednesday: Write a paragraph for each of the 3 reasons.

Thursday: Edit (Read out loud to yourself and fix anything)

Friday: Edit (Read out loud to yourself again and fix anything) then turn in to your math teacher.

**How We Use Decimals Every day and Don't Even Realize It (unknown author)**

It's obvious that every normal person has ten fingers. Since we have ten fingers, our numbering is based on multiples of ten which is called decimal. Can you imagine how life would be different if all human beings were born with eight fingers instead of ten? Maybe our numbering system would be based on multiples of eight. A numbering system based upon eight exists and is called octal. Octal numbering is used behind the scenes in computer systems.

But, of course, in everyday life we use decimal numbers. The idea of decimal numbering comes to us from the ancient civilizations and we still use the numbering based on tens from the Romans. The Roman numeral for ten is X and 20 is XX or 2 times 10. You still see Roman numerals in dates on buildings and movies and each year the Super Bowl gets the next Roman number.

Our decimal numbering, using Arabic numerals instead of Roman numerals, also uses multiples of 10, so 40 means 4 times 10. But you already know that! The other interesting part of decimals is how decimals are used to represent fractions. Way back in 1616, a Scottish mathematician named John Napier suggested that decimal numbering could be used to show fractions and he added the decimal point. Numbers to the left of the decimal point would stand for whole numbers and numbers on the right side would indicate the fractional part.

 So, the number 1 1/2 would be 1.5 in decimal. Wait a minute, how did we get a 5 for 1/2? Since we're using 10 as the base of decimal, half of 10 equals 5. Similarly, the fraction 1/4 becomes 0.25 and 3/4 becomes 0.75. The picture is a little more complicated when you look at 1/3. If you divide 1 by 3 on your calculator you get the decimal value 0.333 with three filling the screen. That's because there isn't a complete equivalent decimal number for 1/3. You have to understand how many digits to the right of the decimal point, called the precision of the decimal number, to use.

Scientists and engineers use decimal numbers all the time in calculations. When you study advanced science topics in high school and college you will learn why the precision of a decimal number is so important in calculations.

For you though decimals are easier to use in arithmetic operations than fractions are. Think about multiplying 1 ¾ by 6 ½. It's easier to multiply 1.75 by 6.5! In fact, think about your calculator. You never see fractions on a calculator. When you do computations on the calculator, you always use decimal numbers.

 Now that we've reviewed what decimals mean and a little bit about how they work, can you think of some examples of how you use decimals in your life? That should be easy.

Money, money, money! There are 100 pennies in a dollar and a half dollar is 50 cents or .50. Every time you buy an item and make change, you are working with decimals. Have you ever noticed how many prices end in .98 or .99? That's so you think that the item costs less than it does. For example, which seems like less money $1.99 or $2?

Of course, $1.99 is less money by a penny but when companies try to get you to buy something, that penny makes a difference because you consider what is to the left of the decimal to be more important. So you will be comparing $1 with $2 and that seems like a big difference.

Decimals show up in lots of other places in daily life as well. Every gas pump shows two sets of decimal numbers, the amount of gas you bought as a decimal and the amount of money you owe. And your gas mileage in miles per gallon is always shown as a decimal number.

Look at the car's odometer; the miles on it are always shown in decimal too. Talking about cars and mileage, have your parents ever used MapQuest to get directions? All mileage in these standard directions are shown as decimal too.