Grade 7 – NUMERACY – LESSON 1

Place Value Decimals

A decimal fraction is part of a whole just like a fraction is. A decimal fraction is another way of writing a common fraction when the denominator (the bottom number) in a fraction is a multiple of 10. The multiples of ten you will be working with today are tenths and hundredths.

Decimal Place Value to Thousandths

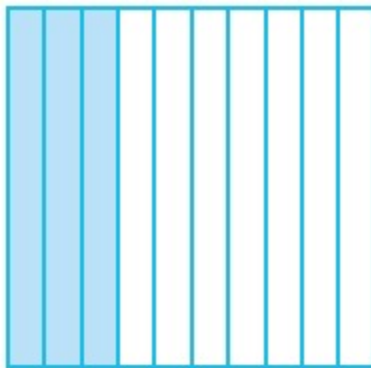When you use money you are working with decimals and I am sure you are familiar with a decimal point.

- For example: $7.60.
- The decimal point separates whole objects (in this case, whole dollars), from parts of whole objects (in this case, cents).

6 dimes are 6/10 of a dollar. It can be written as 0.6 (zero whole dollars and 6 tenths of a dollar).

Tenths

Remember, decimals ALWAYS have a whole that is cut into a multiple of 10 (tenths, hundredths, thousandths...).

One way to show decimals is with base ten blocks. Here is a picture of three tenths:
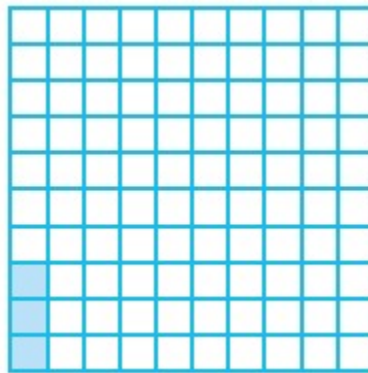
The 3 goes in the tenths place:

Ones	.	Tenths	Hundredths	Thousandths
0	•	3		

What happens if there are one hundred parts in one whole square instead of ten parts?

Hundredths

The square below has 100 parts. These pieces are smaller than the square that had 10 parts. How many are shaded?
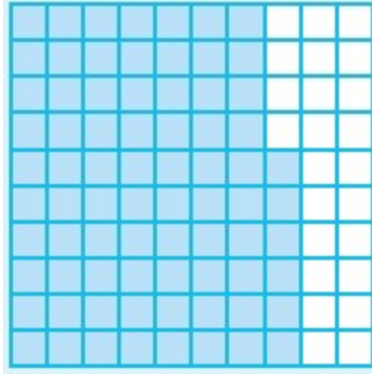

3 out of 100 parts are shaded. As a fraction, this is written 3/100.

What about as a decimal? The three goes in the hundredths place. Notice the placement of zeros in the ones and tenths places.

Ones	.	Tenths	Hundredths	Thousandths
0	•	0	3	

Look at the following picture. There are 76 shaded parts of a square that has 100 pieces.

Because there are 100 pieces in the whole, the last digit goes in the hundredths place:

0.76

This makes it easier to tell how many parts.

Thousandths

Place value is the value of a digit in a number and shows whether the digit's value is tens, hundreds, thousands, etc.

Decimals can also be represented in the place value chart. Decimals represent fractions or parts of a whole and as you move to the right on the place value chart the value of the digit decreases by 10 times with each place it moves.

The decimal point separates the part or fractional number from the whole number.
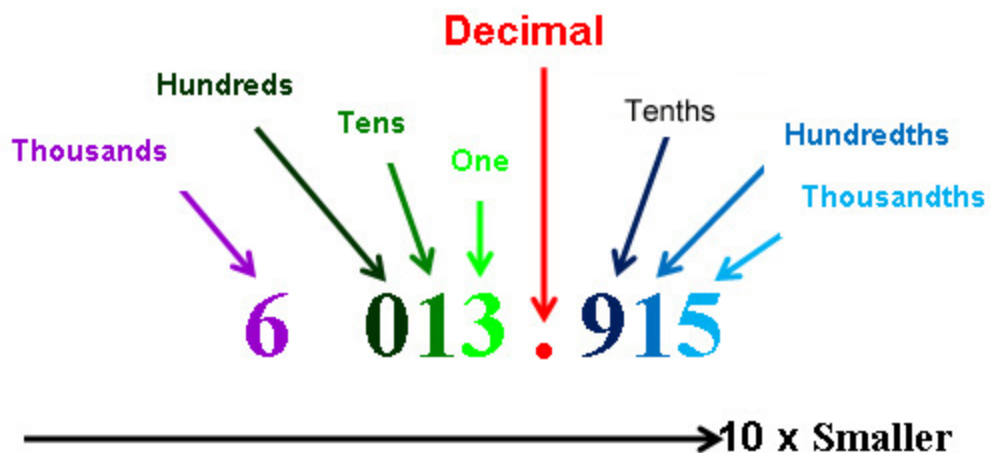
Place Value Chart

Thousands		Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths	Thousandths
6		0	1	3	.	9	1	5

Hint

Place value numbers to the right of the decimal point end in "th" (Example tenth).

10 x Smaller

Decimal

Hundreds
Tens
Thousands
One
Tenths
Hundredths
Thousandths

6 013 . 915

→10 x Smaller

1. Write the number 15.23 into the place value chart below.

Units			.	Decimals		
Hundreds	**Tens**	**Ones**	**.**	**Tenths**	**Hundredths**	**Thousandths**
			.			

2. Write the place value of the underlined digit using words.

Ex.	80.85**6**	Place Value=	Thousandths	Value=	0.006
a.	1.6**8**	Place Value=		Value=	
b.	0.87**9**	Place Value=		Value=	
c.	31.0**2**0	Place Value=		Value=	
d.	1492.**6**	Place Value=		Value=	
e.	0.**0**87	Place Value=		Value=	
f.	62.75**4**	Place Value=		Value=	