Place Value and Base Ten

 *Study Guide*

Test on Wednesday, October 11th, 2016

You should be able to:

* Identify the value of digits according to their place value, from millions to thousandths.

*Example: In the number 306.057, the value of the 3 is 300 or 3 hundreds and the value of the 7 is* $\frac{7}{1000}$ *or 7 thousandths.*

* Understand that a digit is 10x the value of the digit to it’s right and $\frac{1}{10}$ the value of the digit to its left.

*Example: In the number 756.65, the 6 in the ones place is 10 times the value of the 6 in the tenths place. The 6 in the tenths place is* $\frac{1}{ 10}$  *the value of the 6 in the ones place. The 5 in the tens place is 1000x greater than the 5 in the hundredths place, etc.*

* Write numbers in expanded notation, standard form and word form

*Example: 49.564=* (4 x 10) + (9 X 1) + (5 x $\frac{1}{10}$ )+ (6 x $\frac{1}{100}$ )+ (4 x $\frac{1}{1000}$ )

 or (4 x 10) + (9 X 1) + (5 x .1) + ( 6 x .01) + ( 4 x .001)

* Compare and order decimal using the symbols <, >, =

*Example: 5.8 =* $\frac{58}{10}$ *or 63.09 < 63.90*

* Round numbers to the nearest given place value *(through hundred thousands and hundredths)*

*Example: 20,890.79 rounded to the nearest whole number is 20,891 and rounded to the nearest tenth is 20,890.8*

* Solve problems involving powers of ten including exponential powers of ten.

Example: 38.9 x 1000 = 38,900 39.9 $÷1000$ = .0039

 128.7 x $10^{2}$= 12,870 128.7 $÷10^{2}$ = 1.287