Place Value Guided Notes

Digits are mathematical symbols that are arranged in a specific order to represent numeric values. There are ten different digits in our number system: 0 1 2 3 4 5 6 7 8 9.

We use these ten digits (or ten symbols) to create numbers by placing them in a specific order. It is the position of each digit within a number that determines its **place value.** One digit alone can also represent a number. A single digit that represents a number is said to be in the ones place value position.

To assist us in determining place value, we use commas to separate periods of a number, and also use a decimal point to define the location of the ones place.

The ones place is just to the left of the decimal point.

When writing down whole numbers we normally do not write down the decimal point. In this case it is understood that the digit furthest to the right, or rightmost place, is in the ones place.

When we read a number with decimal in it, we read the decimal as "end". We also put "THS" to the end of the last place value.

Hundred-millions	Ten-millions	One-millions	Hundred - thousands	Ten-thousands	One-thousands	Hundreds	Tens	Ones	and	Tenths	Hundredths	One-thousandths	Ten-thousandths	Hundreds-thousandths
100,000,000	10,000,000	1,000,000	100,000	10,000	1,000	100	10	1		0.1	0.01	0.001	0.0001	0.00001
8	9	4,	6	0	0,	3	0	7	.	0	2	0	1	

Whole-number part | Decimal part

894,302,020.0201

Eight hundred ninety-four million, three hundred two thousand, twenty and two hundred one ten-thousandths.

PreAlgebraCoach.com

Place Value Guided Notes

Sample Problem 1: **Write down the place value of the digit 3 in the following numbers.**

a. 213,245

b. 114,365

c. 0.1203

Knowing place values as well as knowing how the periods of a number are ordered, enables us to read and write whole numbers and decimals correctly.

Sample Problem 2: **Write each of the following numbers using words.**

a. 41,004

b. 0.7

c. 0.0030

Sample Problem 3: **Write each of the following numbers using digits.**

a. Eight hundred seven.

b. Two thousand and fifty-four hundredths.

c. Three thousand, fourteen and seventy-seven one-thousandths.

The standard form of number is the usual or common way to write a number using digits.

The expanded form of a number is a way of writing a number as the sum of the value of its digits. The places with zero as a digit are not included in the expanded form.

Place Value Guided Notes

Sample Problem 4: **Write the following numbers in standard form.**

a. 300,000 + 400 + 50 + 2

b. 1000 + 2 + 0.3 + 0.004

c. 1 + 0.5 + 0.006

Sample Problem 5: **Write the following numbers in expanded form.**

a. 1,005,456

b. 234,563,200.045

c. 25.4078