

Name: Teacher

Date: _____

Place Value

Place: The location of a digit in a number.

Value: How much the digit is worth.

The name or symbol used to represent a number (#) is called a Numeral.

Each digit has a certain place value.

hundred millions	ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	units	• decimal	tenths	hundredths	thousandths	ten thousandths
								8	.	2	9		
				1	1	2	2	.	0	0	2	5	

Reading a Decimal Number:

In a decimal number, the place value of a digit depends upon its place in the number.

8.29 eight and twenty-nine hundredths

1122.0025 one thousand one hundred twenty-two and twenty-five ten thousandths.

Face Value

Tells you how many ones, tens, or hundredths, there are

Standard Form

- The full number

Example: 645 124

Expanded Form

- Writing a number showing the total value of each digit

Example: 645 124

$$6 \times 100\,000 + 4 \times 10\,000 + 5 \times 1000 + 1 \times 100 + 2 \times 10 + 4 \times 1$$

$$\text{so } 645\,124 = 600\,000 + 40\,000 + 5\,000 + 100 + 20 + 4$$

Word Form

- Writing a number using words. **Note that we use the word and for a decimal

Example: 8.29 is written as eight and twenty-nine hundredths.

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Expanded Form Practice

Complete the expanded form of the following numbers:

1) $384 = \underline{300} + 80 + \underline{4}$

2) $6257 = 6000 + \underline{200} + \underline{50} + \underline{7}$

3) $37 = 10 \times 3 + \underline{7 \times 1}$

4) $4826 = \underline{1000 \times 4} + 100 \times 8 + \underline{10 \times 2} + \underline{1 \times 6}$

5) $219.2 = \frac{\underline{200}}{100 \times 2} + \frac{\underline{10}}{10 \times 1} + \frac{\underline{9}}{1 \times 9} + \frac{\underline{0.2}}{0.1 \times 2}$

Standard Form Practice

Write the standard form of these expanded form numbers:

1) $800 + 40 + 3 = \underline{843}$

2) $20\,000 + 600 + 40 + 9 = \underline{20\,649}$

3) $1000 \times 4 + 100 \times 5 + 1 \times 3 = \underline{4\,503}$

4) $100 \times 9 + 1 \times 8 + 1/10 \times 5 = \underline{908.5}$