

# Fifth Grade Beginning of Year Study Guide

## Math Vocabulary

- Factor:** the numbers that are multiplied together in a multiplication problem (Ex: the factors of 20 are 1 and 20, 2 and 10, 4 and 5)
- Prime:** a number that has only two factors: one and the number itself (Ex:  $11 = 1 \times 11$ )
- Composite:** a number that has more than two factors. (Ex:  $12 = 1 \times 12$ ,  $12 = 2 \times 6$ , and  $12 = 3 \times 4$ , so the factors of 12 are 1, 2, 3, 4, 6, 12).
- Multiples:** the numbers you get when skip counting (Ex: the multiples of five are 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, . . .)

## Order of Operations

The order to do math equations in (PEMDAS)

	<b>Example</b>	<b>Steps</b>
<b>P</b> = parentheses come first	$2 + 7 \times 4 - 3^2 \div (4 - 1)$	$4 - 1 = 3$
<b>E</b> = exponents come next	$2 + 7 \times 4 - 3^2 \div 3$	$3^2 = 9$
<b>MD</b> = multiply or divide, from left to right	$2 + 7 \times 4 - 9 \div 3$	$7 \times 4 = 28$ & $9 \div 3 = 3$
<b>AS</b> = add or subtract, from left to right	$2 + 28 - 3$	$2 + 28 = 30$
	$30 - 3$	$30 - 3 =$
	<b>27</b>	<b>27</b>

## Place Value

Fifth graders need to be able to read, write, and expand both very large (millions) and very small (thousandths) numbers.

**Standard Form:** **3,427.193**

**Word Form:** three thousand, four hundred twenty-seven, and one hundred ninety-three thousandths

**Expanded Form:**

$$3,000 + 400 + 700 + 0.1 + 0.09 + 0.003$$

**Value:** How much a number is worth.

For example, the digit 4 above is valued at 400.

The 9 digit's value is 9 tenths.

hundred millions	ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	units	• decimal	tenths	hundredths	thousandths	ten thousandths

Practice writing and reading numbers by using this chart!

## Rounding Numbers

When rounding numbers to estimate, look at the digit to the right of the place you are rounding to. If the digit is 0-4, round down. If the digit is 5-9, round up.

Example: 94 round to nearest ten  
9 is in the tens place, look at the 4  
Rule is 0-4, round down.  $94 \rightarrow 90$ .

Example: 8.76 round to nearest tenth  
7 is in the tenths place, so look at the 6  
Rule is 5-9 round up.  $8.76 \rightarrow 8.80$  or  $8.8$

Five or more,  
Raise the score.  
Four or less,  
Let it rest.