# 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)

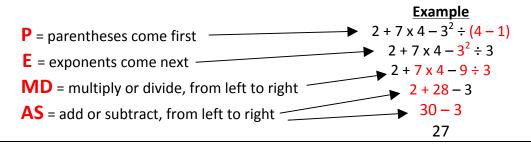
**Prime**: a number that has only two factors: one and the number itself (Ex:  $11 = 1 \times 11$ )

**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)



| <u>Steps</u>                      |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|--|--|--|--|--|--|--|--|--|--|
| 4 - 1 = 3                         |  |  |  |  |  |  |  |  |  |  |
| $3^2 = 9$                         |  |  |  |  |  |  |  |  |  |  |
| $7 \times 4 = 28 \& 9 \div 3 = 3$ |  |  |  |  |  |  |  |  |  |  |
| 2 + 28 = 30                       |  |  |  |  |  |  |  |  |  |  |
| 30 – 3 =                          |  |  |  |  |  |  |  |  |  |  |
| 27                                |  |  |  |  |  |  |  |  |  |  |

#### **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 | <ul> <li>decimal</li> </ul> | 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.