### **Grade 5: Chapter 1 Vocabulary**

### **base (arithmetic)**

A number used as a repeated factor.

#### Example:

 $8^3$  = 8 x 8 x 8. The base is 8.

## **Associative Property of Addition**

The property that states that when the grouping of <u>addends</u> is changed, the <u>sum</u> is the same.

#### Example:

$$(5+8)+4=5+(8+4)$$

## **Commutative Property of Addition**

The property that states that when the order of two or more <u>addends</u> is changed, the <u>sum</u> is the same

#### Example:

$$4 + 5 = 5 + 4$$

# **Identity Property of Addition**

The property that states that when you add zero to a number, the result is that number.

### Examples:

$$4 + 0 = 4$$

$$59 + 0 = 59$$

## **Commutative Property of Multiplication**

The property that states that when the order of two or more <u>factors</u> is changed, the <u>product</u> is the same

#### Example:

$$4 \times 5 = 5 \times 4$$

**Associative Property of Multiplication** 

The property that states that the way <u>factors</u> are grouped does not change the <u>product</u> **Example:** 

$$(2 \times 3) \times 4 = 2 \times (3 \times 4)$$
  
 $6 \times 4 = 2 \times 12$   
 $24 = 24$ 

**Identity Property of Multiplication** 

The property that states that the <u>product</u> of any number and 1 is that number. **Example:** 

$$9 \times 1 = 1 \times 9$$

**Distributive Property** 

The property that states that multiplying a <u>sum</u> by a number is the same as multiplying each addend by the number and then adding the <u>products</u>

### Example:

$$14 \times 21 = 14 \times (20 + 1) = (14 \times 20) + (14 \times 1)$$

## **evaluate**

To find the value of a numerical or algebraic <u>expression</u>

#### Example:

```
Find 4 \times d if d = 6.

4 \times 6 \leftarrow \text{Replace } d \text{ with } 6.

\downarrow

24
```

## standard form

A way to write numbers by using digits

#### Example:

3,540

## expanded form

A way to write numbers by showing the value of each digit

### Examples:

$$253 = 200 + 50 + 3$$

### **exponent**

A number that shows how many times the  $\underline{\text{base}}$  is used as a  $\underline{\text{factor}}$ 

### Example:

The exponent is 3, indicating that 8 is used as a factor 3 times

### inverse operations

Operations that undo each other, like <u>addition</u> and <u>subtraction</u> or <u>multiplication</u> and <u>division</u>.

#### Examples:

$$5 + 4 = 9$$
, so  $9 - 4 = 5$   
 $3 \times 4 = 12$ , so  $12 \div 4 = 3$ 

### numerical expression

A mathematical phrase that uses only numbers and operation symbols.

#### Examples:

60 + 25

42 ÷ 7

 $51 \times 36$ 

## order of operation

A special set of rules which gives the order in which calculations are done in an expression.

- 1. Do the operations inside parentheses.
- 2. Multiply and divide from left to right.
- 3. Add and subtract from left to right.

### Example:

$$6 + (4 \times 2) \div 2 - 5$$
 Multiply inside parentheses.  
 $6 + 8 \div 2 - 5$  Divide.  
 $6 + 4 - 5$  Add.  
 $10 - 5$  Subtract.

# <u>period</u>

Each group of three <u>digits</u> separated by commas in a multidigit number

## Example:

Period			Period			Period		
Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	8	5,	6	4	3,	9	0	0

85,643,900 has three periods.