**Unit 2: “Ratios & Proportional Relationships”** **Vocabulary List**

**Unit Rate:** a comparison of 2 measurements in which one of the terms has a unit of 1

**Examples:** $3.29/1 liter or 25 miles/1 gallon

**Usefulness:** Helpful in making comparisons. For example: Which is cheaper per ounce if the 32 ounce bottle of detergent is $7.29 and the 24 ounce is $6.29?

**Ratios:**

A comparison of 2 or more amounts

 \*\*They can be written as 3:4 or as a fraction

**Ratios can be part to whole:** He got 1 out of 6 questions right

**Ratios can be part to part:** 2 cups of sugar for every cup of oil

**Proportion:**

The equality of two ratios, written as an equation.

**Example:**

$\frac{5}{19}$ = $\frac{x}{10}$

**Coordinate Plane (Also called the Cartesian Plane):**

A plane containing two perpendicular axes (the x and y axis), intersecting at a point called the origin (0,0)

Linear Equation:

An equation that represents a straight-line when graphed.

Equation of a line: y = mx + b

* M = Slope of the line
* B = Represents the point where the line intercepts the y-axis

Examples of linear equations:

5x + 2 = 10 8 = -4x -4

Equation:

A mathematical statement containing an equals sign, to show that two expressions are equal

Examples:

2x – 4 = 8 3(x + 2) -4x = 5x + 2

Percents:

Number out of 100

Example: 54% is 54 out of 100

2.3% is 2.3 out of 100

Note: To calculate with a percent, you must change it to an equivalent fraction or decimal value

Interest:

a sum paid or charged for the use of money or for borrowing money.

Simple Interest Formula: I = prt

(note: no signs between variables indicate that you would multiply)

I = Interest

P = Principal (starting amount)

R = Interest Rate (ex. 5%)

T = Time (the amount of time the money is saved/borrowed)

Markup:

The difference between the cost price and the selling price.

Example of a Markup: Luis bought the candy bars for $0.75 but was going to sell them for $1.00.

Commission:

An amount of money or a percentage given to a salesperson

Example: Joe’s real estate agent will make 3% commission on the sale of the house. Since the house was $100,000, the real estate agent will make $3000.

Percent Error (also sometimes known as relative error):

$\frac{\left|Your result-accepted value\right|}{accepted value}$ x 100

Example of when to use percent error formula:

A student measured the temperature of boiling water and got an experimental reading of 97.5°C. What is the percent error?

Percent Increase or Percent Decrease:

 The percentage for which a value increased or decreased.

To calculate: $\frac{New value-Original Value}{Original Value}$ x 100

Example Problem:

 Ann works in a supermarket for $10.00 per hour. If her pay is increased to $12.00, then what is her percent increase in pay?