Study Guide

Chapter 1 Test

1.1: Evaluate expressions and powers

- Be able to substitute variables and perform operations including exponents

Ex: Evaluate when $a = 10$, $b = 3$, $x = 2$

$ax - xb^2$

Ex: Evaluate x^3 when $x = 0.7$

1.2: Evaluate order of operations

- Be able to follow PEMDAS in order to solve problems

Ex: $[2 - (3^2 - 8)] + 3[1 + (6 - 2)^2]$

Ex: Evaluate when $x = 5$, $y = 3$, $z = 7$

$$\frac{xz-y}{x+y}$$

1.3 – 1.4: Write expressions, equations and inequalities

- Identify key words to translate verbal phrases into algebraic expressions, equations or inequalities

Ex: 5 less than 6 more than a number x

Ex: the quotient of a number t and 5 is at least 20

Ex: the product of 6 and the sum of p and 8 is 42

Ex: Which is the better buy…a 16-ounce bottle of Gatorade for $1.99 or a 34-ounce jug for $4.05? Explain how you know. (You may use a calculator)

1.6 – 1.7: Represent Functions as Tables, Rules and Graphs

- **Be able to identify functions, domain and range.**
- **Write a rule for a function**
- **Make a table for a function**
- **Graph a function**

Ex: Is the following a pairing a function? If no, say when if yes identify domain and range.

X	***Y***
0	8
5	10
10	8
15	6

Ex: Is the following a pairing a function? If no, say when if yes identify domain and range.

X	0	3	3	6	9
Y	1	7	19	23	6

Ex: Write a rule for the given function.

X	***Y***
7	21
9	25
11	29
13	33
15	37

Ex: Make a table for the given function and then graph.

$y = 3x - 4$ with a domain of 1, 3, 7, 8, 12