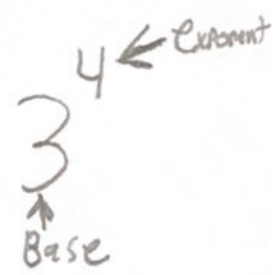Topic 3 Quiz Study Guide

GEMDAS
Know the order of operations.

Exponents
Each power has 2 parts. A base and an exponent.
The base tells you what factor you are using.
The exponent tells you how many times you are going to be multiplying the base

3^4 ← Exponent

Base ↑

Exponent Rules
Any number raised to the power of zero has a value of 1.
Any number raised to the power of one has a value of itself.

$$3^0 = 1 \qquad 3^1 = 3$$

Prime Factorization
Use a factor tree to break down numbers into small chunks. Each one of these chunks needs to be a prime number. You stop breaking down a number when you get to a prime number. If you are dealing with a prime number like 5. The prime factorization is just one and itself. Example: The prime factorization of 5 is 1x5.

5
1   5

1 × 5

12
2   6
2   3

2 × 2 × 3 =

35
5   7

5 × 7