**Pre-Algebra Ch. 1 Study Guide**

\*Variables and Expressions (sec. 1)

Ex- Write a variable expression for the word phrase: *four times some number n*

Answer: **4n**

**\***Order of Operations (sec. 2)

Ex- Simplify the expression: 4+2×8÷2

Answer: 4+(16)÷2= 4+(8)= **12**

**\***Evaluating Expressions (sec. 3)

Ex- Evaluate the expression: 9+4m for m=3

Answer: 9+4(3)= 9+12= **21**

\*Integers and Absolute Value (sec. 4)

Ex- Simplify: l-9l

Answer: **9**

\*Adding Integers (sec. 5)

Ex- 2 + (-6)

Answer: **- 4**

\*Subtracting Integers (sec. 6)

Ex- (-8)-4

Answer: (-8) + (-4) = **- 12** (Remember when subtracting integers, we add the opposite of the number being subtracted)

\*Inductive Reasoning (sec. 7)

Ex- Write a rule for the pattern below. Find the next two numbers in the pattern:

8, 4, 16, 8, 32, \_\_\_\_\_, \_\_\_\_\_\_\_

Answer: **16, 64**

**Rule: Start with 8, alternately between dividing by 2 and multiplying by 4**

\*Look for a Pattern (sec. 8)

Ex- Suppose you are working in a bagel shop. You stock the front case with 10 dozen bagels. You sell 3 dozen and bring 7 dozen from the kitchen. Then you sell 5 dozen and bring out 9 dozen. You sell more bagels, then count the bagels in the case. According to the pattern, how many dozen bagels are in the display case?

Answer: **11 dozen**

\*Multiplying and Dividing Integers (sec. 9)

Ex- (-60)÷(-4)

Answer: **15 (a negative divided by a negative= a positive)**

\*The Coordinate Plane (sec. 10)

Ex- In which quadrant does the point (14, -3) lie?

Answer: **IV**

**\*Also remember to look over graphing of coordinates!**