Name: _____ Date: _____

Steps to working problems:

1. Write down all information and label it. If the units you have are moles and liters, just divide to get the molarity. Molarity = moles / liters

2. If you are given ml instead of liters then convert by putting the given ml over one and multiply by one liter over 1000 ml.

3. If you are given grams instead of moles, convert using the chart number. For example, if the compound is water you would multiply 2 by the number under H (1.01) then add that to the number under Oxygen (16.00). That gives you 18.02 grams per mole. So you put the given number of grams over one, multiply by one mole over the chart number of grams.

4. If you are given molarity and volume (L) you will multiply those numbers to get moles. (Cross multiply) moles = molarity x liters

5. If you are given molarity and moles you will divide moles by molarity to get liters. (Cross multiply and then divide)   liters = moles / molarity

6. If they want the answer in grams, you will follow step #3 but the conversion factor will be flipped and the answer will be in grams instead of moles.

Show all work: Write the formula, the formula with the numbers and units in it, the answer with the proper significant digits, and box your answer.

1. What is the molarity of 5.85 liters of solution that contains 359.7 grams of NaCl?

2. What volume is needed to produce a 7.8 M solution with 650. grams of CaF_2?

3. How many grams of H_2SO_4 is needed to make a 0.56 M solution using a 0.150 L volumetric flask?

4. What is the molarity of a solution containing 25.8 grams of $CaCl_2$ in a 50.0 ml volumetric flask?

5. How many grams of HF are needed to produce a 0.05 M solution using a 500. ml volumetric flask?