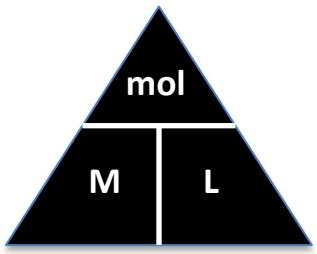
Chemistry **Name_____**
Chapter 16 – Concentrations of Solutions **Date _____ Block___**

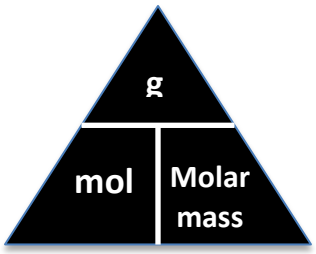
Molarity

- A way to measure the _____ or _____ of a solution.
  - The _____ the molarity, the _____ the solution.
  - Symbol: _____
  - Equation:

- Molarity Equation Reminder



- Mole Conversion Reminder



- **Practice Problem 1**
  - Intravenous (IV) saline solutions are often administered to patients in the hospital. One saline solution contains 0.90 g NaCl in exactly 100 mL of solution. What is the molarity of the solution?

- **Practice Problem 2**
  - Household laundry bleach is a dilute aqueous solution of sodium hypochlorite (NaClO). How many moles of solute are present in 1.5 L of 0.70 M NaClO?

Dilutions

- Sometimes chemists need to create dilutions using know molarities and volumes when a less concentrated solution is desired.

- No change in the number of _____ of solute!

- **Practice Problem 1**
  - How many milliliters of aqueous 2.00 M $MgSO_4$ solution must be diluted with water to prepare 100.0 mL of aqueous 0.500 M $MgSO_4$?

- **Practice Problem 2**
  - You put 2 moles of HCl into 312 mL of water. If you wanted to make a 1 M dilution, how many milliliters would you need to dilute with water?