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| **Variables** | **Simple Formulas Continued** |
| D = density = mass  V = volume K = kelvin  P = pressure R = gas constant  T = temperature M = molarity  n = number of moles N = normality  q = quantity of heat energy  Cp = specific heat  Hv = heat of vaporization  Hf = heat of fusion  Kw = equilibrium constant  for the ionization of water  **Conversions**  1 ATM = 760 mmHg = 760 torr = 101.3 kPa  1 cm3 = 1 mL  **For Water:** 1 Kg = 1 L 1 g = 1 mL  STP: 1 ATM & 273.1 K  AT STP: 1 Mol Gas = 22.4 L  **Simple Formulas**  *Oxidation Number:*  *0= Subscript of Metal (X) + Subscript non-metal (Ox #)* | x 100  Percent Yield = Lab Value  Theoretical or expected X 100  Percent Error = X 100  Moles = M X V  *Normality (N) = Molarity \* # of Equivalence* |
| **Simple Mole Map:**  **÷** Molar Mass X 6.022 x1023 atoms/molecules  **Grams Moles Atoms/Molecules**    X Molar Mass **÷** 6.022 x1023 atoms/molecules | |
| **Empirical Formula: Formula for a Hydrate**   1. **Calculate moles 1. Find Grams of anhydrous material and water** 2. **Find Ratio of moles 2. Calculate moles of each** 3. **Use whole number as subscripts 3. Find Ratio of moles use as multiplier** | |
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