

# Chem 8 comp review Native exam

## - Stoichiometry

1. mass  $\leftrightarrow$  mole  $\leftrightarrow$  particle  
particle  $\leftrightarrow$  mole  $\leftrightarrow$  mass
2. Calc mass product, theoretical yield given reactant and another reactant in excess
3. Calc mass other reactant used.
4. LR problems
  1. Find L.R from mass
  2. Find L.R from moles
  3. mass other reactant used
  4. mass other reactant that remains
5. % yield
6. % mass  $\leftarrow$  % mass element in compound
7. Empirical formulas
  1. EF from grams, %, moles
  2. MF from EF
8. Electron Config.
  1. EC 1<sup>st</sup> 4 periods
  2. EC ions
  3. noble gas EC
  4. core  $e^-$  vs valence, calc  $Z_{eff}$
9. Periodic Trends
  1. size
  2. ionization energy
  3. electronegativity
  4. Force of attraction
  5. size of ions + why  $\rightarrow$  #  $e^-$ 's in cations and anions

## - Types of Rxns

1. Redox (rules to assign ox #)
2. neutralization
3. PPT (solubility rules)

## - Net ionic equations

1. neutralization
2. PPT

## - Redox

1. assign reactant oxidized and reactant reduced. see rules
2. calc ox # element in formula eg. Find S in  $H_2SO_4$

## - Lewis Formulas

1. octet rule structures
2. violators with B or Be
3. Assign hybridization
4. polar bond
5. Polar molecule
6. IMFs

## - Titration calcs including

1. acid/base
2. redox

## - Gases

1.  $PV = nRT$
2.  $PM_n = dRT$

## - Balancing Equations