

## Quiz for Video 6 – Net Ionic Reactions

- In a precipitation/double displacement reaction, what is forming?
  - A soluble cation
  - An insoluble ionic compound
  - A high amount of energy
  - Gaseous Molecules
- Which of the following compounds is the most soluble? (and follows our general solubility rules)
  - KCl
  - PbCl<sub>2</sub>
  - MgSO<sub>4</sub>
  - ZnO
- Which of the following compounds is most likely to be insoluble? (and does not follow our general solubility rules)
  - NaOH
  - NH<sub>4</sub>F
  - Zn(C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>)<sub>2</sub>
  - Fe(OH)<sub>2</sub>
- The following chemical reaction should be classified as what type of reaction?  
 $\text{HBr} + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+ + \text{Br}^-$ 
  - Acid/Base
  - Redox
  - Double Displacement
  - Single Displacement
- Redox (oxidation/reduction) reactions involve the transfer of what?
  - Electrons (e<sup>-</sup>)
  - protons (H<sup>+</sup>)
  - Positrons (e<sup>+</sup>)
  - Water (H<sub>2</sub>O)
- For the following reaction showing the combustion of methane, how many moles of water (H<sub>2</sub>O) are formed from the combustion of 2.4 moles of methane (CH<sub>4</sub>)?  
 $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$ 
  - 1.2 moles
  - 2 moles
  - 2.4 moles
  - 4.8 moles
- Predict the product(s) of the following reaction:  $\text{NaOH}(\text{aq}) + \text{FeCl}_2(\text{aq}) \rightarrow$ 
  - Fe(OH)<sub>2</sub>(s) and NaCl(aq)
  - Fe(OH)<sub>2</sub>(aq) and NaCl(s)
  - NaCl(aq) only
  - H<sub>2</sub>O(l) only
- What is the role of Na<sup>+</sup> in the net ionic reaction:  
 $2\text{AgNO}_3 + \text{Na}_2\text{CrO}_4 \rightarrow \text{Ag}_2\text{CrO}_4 + 2\text{NaNO}_3$ 
  - Precipitate
  - Reactant
  - Product
  - Spectator Ion
- Why are spectator ions often left out of a reaction?
  - Because they are irrelevant
  - Because they are not changing chemically
  - Because they are massless
  - Because they are chargeless
- If we know that 3 moles of iron (Fe) are consumed in the following reaction, how many moles of hydroxide (OH<sup>-</sup>) should be consumed?  $\text{Fe}^{2+} + 2\text{OH}^- \rightarrow \text{Fe}(\text{OH})_2(\text{s})$ 
  - 1.5 moles
  - 2 moles
  - 3 moles
  - 6 moles