

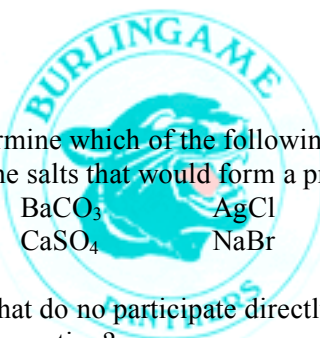


## Chemical Reactions Ws #3: Reactions in Aqueous Solutions

8.1

- There are several “tendencies” in reactants that drive them to form products. These are called “Driving Forces”. List the four main driving forces that pull reactants toward products.
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- Define a strong electrolyte.
- What is contained in the resulting solution when ionic compounds dissolve?
- A solid ionic compound must have a \_\_\_\_\_ net charge and they contain only \_\_\_\_\_ types of ions. One of these ions is a positively charged ion called a \_\_\_\_\_ and the other ion must be a negatively charged ion called a(n) \_\_\_\_\_.
- What happens to the to the reactants that do not form a product?
- Do oppositely charged ions in water always react to form a solid?
- Define the following terms:
  - soluble solid
  - insoluble solid
  - slightly soluble solid
- Use the solubility rules to determine which of the following salts are soluble and which are insoluble in water. Circle all the salts that would form a precipitate in aqueous solution.
 

i. $\text{NaNO}_3$	$\text{BaCO}_3$	$\text{AgCl}$	$\text{KCl}$	$\text{LiOH}$
ii. $(\text{NH}_4)\text{SO}_4$	$\text{CaSO}_4$	$\text{NaBr}$	$\text{HgBr}_2$	$\text{Ca}(\text{OH})_2$



8.2 A

- What is the name for the ions that do not participate directly in a reaction in solution?
- What is included in a net ionic equation?
- Give the Arrhenius definition of Acid and Base.

8.2 B

- When strong acids and strong bases are mixed, the product is always \_\_\_\_\_.
- Water is a very \_\_\_\_\_ compound. The hydroxide ion has a high affinity for the \_\_\_\_\_ ion.
- By what process do neutral atoms become ions?
- The reaction of a metal with a nonmetal to form an ionic compound involves the transfer of one or more \_\_\_\_\_ from the metal.
- What is the name for the type of reaction that involves a transfer of electrons?

8.3 A

- Write an example of a chemical equation for each driving force.
 

Formation of a solid:

Formation of water:

Transfer of electrons:

Formation of a gas:

8.3 B

- How can you tell if a reaction in aqueous solution produces a gas?
- What is a single replacement reaction?
- What is a combustion reaction?
- What is another name for a synthesis reaction?
- What is the name for a reaction in which a compound is broken down into simpler compounds or all the way to the component elements?