## Reaction Basics

Place a box around the reactants and a circle around the products for each reaction below.

- 1.  $NaOH_{(aq)} + HCI_{(aq)} \rightarrow NaCI_{(aq)} + H_2O_{(l)}$
- $2. \quad \mathsf{C_4H_{8(l)}} + \mathsf{6O_{2(g)}} \to \mathsf{4CO_{2(g)}} + \mathsf{4H_2O_{(g)}}$
- $3. \quad 2\text{Al}_{\text{(s)}} + 3\text{CuCl}_{\text{2(aq)}} \rightarrow 2\text{AlCl}_{\text{3(aq)}} + 3\text{Cu}_{\text{(s)}}$

Write the correct state for each item below.

- 4. H<sub>2</sub>O<sub>(g)</sub>
- 5. HCl<sub>(aq)</sub>
- 6. H<sub>2</sub>O<sub>(I)</sub>
- 7. BaSO<sub>4(ppt)</sub>
- 8. Al<sub>(s)</sub>

Write each word equation as a formula equation.

- 9. A solid piece of zinc is placed in a solution of hydrochloric acid (HCl). It produces a solution of zinc chloride and hydrogen gas. (Hint: hydrogen is diatomic in its elemental form)
- 10. A solution of hydrogen peroxide decomposes into liquid water and oxygen gas.
- 11. Natural gas (CH<sub>4</sub>) burns in air (O<sub>2</sub>) to produce carbon dioxide and water vapor.