Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Review – Chemical Equations** Period \_\_\_\_\_

**In each blank, write the word or phrase that best completes the following passage.**

When a piece of magnesium metal is added to hydrochloric acid, fizzing occurs and hydrogen gas

is released. The fizzing is evidence that a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has occurred between magnesium and hydrochloric acid. Magnesium and hydrochloric acid in this case are called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the reaction, and the hydrogen gas that is released is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the reaction. Some other indications that chemical reactions have occurred might be change of color or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or the formation of a solid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If a thermometer is placed into a mixture undergoing a reaction,

you might observe that the temperature has gone up or down, indicating that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was being released or absorbed. The shorthand form by which a reaction is represented is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. In using this method of representation, you must satisfy the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a principle that states that matter is neither created nor destroyed during chemical processes. In order to satisfy this principle, you must select the proper numerical \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, placed in front of each chemical, to indicate the number of units of each substance taking part in the chemical change.

**Express *in words* what each of the terms or symbols means in the following chemical equation:**

**Mg(s) + 2HCl(aq) → MgCl2(aq) + H2(g)**

**Mg**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(s)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**+** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**HCl** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(aq)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**→** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**MgCl2** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**H2** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(g)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Balance each of the following chemical equations.**

1. \_\_\_\_B2S3 + \_\_\_\_H2O → \_\_\_\_H3BO3 + \_\_\_\_H2S

2. \_\_\_\_PH3 + \_\_\_\_O2 → \_\_\_\_H2O + \_\_\_\_P4O10

3. \_\_\_\_C3H8O + \_\_\_\_O2 → \_\_\_\_CO2 + \_\_\_\_H2O

4. \_\_\_\_SiF4 + \_\_\_\_H2O → \_\_\_\_H2SiF6 + \_\_\_\_H2SiO3

5. \_\_\_\_Pb(C2H3O2)2 + \_\_\_\_K2CrO4 → \_\_\_\_PbCrO4 + \_\_\_\_KC2H3O2

**Write a balanced chemical equation for each of the reactions described below.**

1. Aluminum metal burns in pure oxygen gas to produce solid aluminum oxide.

2. When solid mercury(II)oxide is heated, it breaks down to form liquid mercury and oxygen gas.

3. Copper metal and iron(II)nitrate in solution are formed when iron metal is added to a solution of

copper(II)nitrate.

4. The addition of a solution of ammonium sulfate to a solution of lead(II)chloride results in the

formation of ammonium chloride, which remains in solution, and a precipitate of lead(II)sulfate.

5. Hydrogen sulfide gas reacts with pure oxygen gas to from water vapor and solid particles of sulfur.