Name: \_\_\_\_\_

Block: \_\_\_\_\_

## Parts of a Chemical Equation

Write each of the following chemical equations as a word problem.

 $1. \ 2 \operatorname{H}_{2}\left(g\right) + \operatorname{O}_{2}\left(g\right) \xrightarrow{}{} 2 \operatorname{H}_{2} \operatorname{O}\left(\ell\right) + 572 \, \mathrm{kJ}$ 

2. 
$$\operatorname{CaC}_{2}(\operatorname{cr}) + 2\operatorname{H}_{2}O(\ell) \longrightarrow \operatorname{C}_{2}\operatorname{H}_{2}(g) + \operatorname{Ca}(\operatorname{OH})_{2}$$

3. 
$$2 C_2 H_2(g) + 5 O_2(g) \xrightarrow{\Delta} 4 CO_2(g) + 2 H_2 O(\ell) + 2,600 \text{ kJ}$$

4. 
$$3 \operatorname{NaCl}(aq) + K_3 \operatorname{PO}_4(aq) \rightleftharpoons \operatorname{Na}_3 \operatorname{PO}_4(aq) + 3 \operatorname{KCl}(aq)$$

Write each of the following word problems as a chemical equation.

5. One molecule of silicon dioxide gas reacts with four molecules of aqueous hydrofluoric acid to produce a molecule of silicon tetrafluoride gas and two molecules of liquid water.

6. Two moles of aqueous potassium chlorate decompose to produce two moles of aqueous potassium chloride and three moles of oxygen gas.

7. Four moles of solid antimony are heated in the presence of three moles of oxygen gas to form one mole of antimony (III) oxide.

8. When 2 moles of liquid octane  $(C_8H_{18})$  are burned in the presence of 25 moles of oxygen gas, 16 moles of carbon dioxide gas and 18 moles of liquid water are formed, and 10,150 kJ of heat is produced.