



1. **Directions:** Write a skeleton equation for each chemical reaction. Include the correct symbols (table 11.1).

a. Sulfur burns in oxygen to form sulfur dioxide.

b. Heating potassium chlorate in the presence of the catalyst manganese dioxide produces oxygen gas.
Potassium chloride is left as a solid.

2. **Directions:** Write a sentence that describes each chemical reaction.

a. $\text{KOH}(aq) + \text{H}_2\text{SO}_4(aq) \rightarrow \text{H}_2\text{O} + \text{K}_2\text{SO}_4(aq)$

b. $\text{Na}(s) + \text{H}_2\text{O}(l) \rightarrow \text{NaOH}(aq) + \text{H}_2(g)$

3. **Directions:** Rewrite these word equations as skeletal equations, and then balance them.

a. Hydrogen + sulfur \rightarrow hydrogen sulfide

b. Iron (III) chloride + calcium hydroxide \rightarrow iron (III) hydroxide + calcium chloride

c. Sodium + water \rightarrow sodium hydroxide + hydrogen

d. Calcium hydroxide + sulfuric acid \rightarrow calcium sulfate + water

