

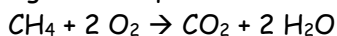
## Drawing Chemical Equations

Name \_\_\_\_\_

For each reaction:

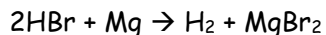
- draw a representation of the chemical statement
- complete an atom inventory of the reactants and products
- decide whether the chemical statement is balanced

1) Many people use natural gas as a source of household heat. Natural gas contains methane ( $\text{CH}_4$ ), which burns with oxygen gas ( $\text{O}_2$ ) in air according to the equation:



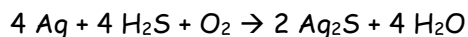
Is it balanced? \_\_\_\_\_

2) When an acid reacts with an active metal, hydrogen gas and an ionic compound are often formed. An expression for hydrobromic acid ( $\text{HBr}$ ) reacting with magnesium metal to form hydrogen gas and magnesium bromide ( $\text{MgBr}_2$ ) is:

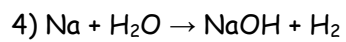


Is it balanced? \_\_\_\_\_

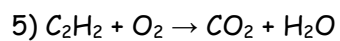
3) Hydrogen sulfide ( $\text{H}_2\text{S}$ ) and metallic silver react in air to form silver sulfide ( $\text{Ag}_2\text{S}$ ), commonly known as silver tarnish, and water:



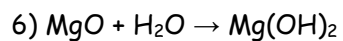
Is it balanced? \_\_\_\_\_



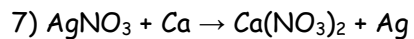
Is it balanced? \_\_\_\_\_



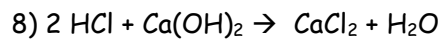
Is it balanced? \_\_\_\_\_



Is it balanced? \_\_\_\_\_



Is it balanced? \_\_\_\_\_



Is it balanced? \_\_\_\_\_