

### TYPES OF REACTIONS

Directions: Classify the following as synthesis, decomposition, combustion, single displacement, double displacement, or a combination of two of these. Explain why you came to the conclusion you did (e.g., for decomposition, the reactant breaks down to form 2 or more products.)

1.  $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$  \_\_\_\_\_
2.  $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$  \_\_\_\_\_
3.  $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$  \_\_\_\_\_
4.  $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$  \_\_\_\_\_
5.  $2\text{Al} + 3\text{NiBr}_2 \rightarrow 2\text{AlBr}_3 + 3\text{Ni}$  \_\_\_\_\_
6.  $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$  \_\_\_\_\_
7.  $2\text{NaCl} \rightarrow 2\text{NaI} + \text{Cl}_2$  \_\_\_\_\_
8.  $\text{CaCl}_2 + \text{F}_2 \rightarrow \text{CaF}_2 + \text{Cl}_2$  \_\_\_\_\_
9.  $\text{AgNO}_3 + \text{KCl} \rightarrow \text{AgCl} + \text{KNO}_3$  \_\_\_\_\_
10.  $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$  \_\_\_\_\_
11.  $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2 + \text{O}_2$  \_\_\_\_\_
12.  $(\text{NH}_4)_2\text{SO}_4 + \text{Ba}(\text{NO}_3)_2 \rightarrow \text{BaSO}_4 + 2\text{NH}_4\text{NO}_3$  \_\_\_\_\_
13.  $\text{MgI}_2 + \text{Br}_2 \rightarrow \text{MgBr}_2 + \text{I}_2$  \_\_\_\_\_
14.  $\text{SO}_3 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_4$  \_\_\_\_\_
15.  $6\text{KCl} + \text{Zn}_3(\text{PO}_4)_2 \rightarrow 3\text{ZnCl}_2 + 2\text{K}_3\text{PO}_4$  \_\_\_\_\_
16.  $2\text{KI} + \text{Pb}(\text{NO}_3)_2 \rightarrow 2\text{KNO}_3 + \text{PbI}_2$  \_\_\_\_\_
17.  $2\text{C}_2\text{H}_6 + 7\text{O}_2 \rightarrow 4\text{CO}_2 + 6\text{H}_2\text{O}$  \_\_\_\_\_
18.  $2\text{SO}_3 \rightarrow 2\text{S} + 3\text{O}_2$  \_\_\_\_\_
19.  $3\text{Zn} + 2\text{FeCl}_3 \rightarrow 3\text{ZnCl}_2 + 2\text{Fe}$  \_\_\_\_\_
20.  $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$  \_\_\_\_\_