

Name \_\_\_\_\_

Acid/Base Reactions

\_\_\_\_\_ 1. Which substance is an Arrhenius Acid?

1.  $\text{NH}_3$

2.  $\text{KH}$

3.  $\text{C}_2\text{H}_3\text{OOH}$

4.  $\text{CH}_4$

\_\_\_\_\_ 2. Which substance is an Arrhenius Base?

1.  $\text{Mg}(\text{OH})_2$

2.  $\text{C}_2\text{H}_4(\text{OH})_2$

3.  $\text{C}_2\text{H}_3\text{OOH}$

4.  $\text{CH}_3\text{OH}$

\_\_\_\_\_ 3. Which of the following metals will react with hydrochloric acid?

1.  $\text{Au}$

2.  $\text{Ag}$

3.  $\text{Cu}$

4.  $\text{Fe}$

\_\_\_\_\_ 4. Which equation represents a neutralization reaction?

1.  $\text{Na}_2\text{CO}_3 + \text{CaCl}_2 \rightarrow 2 \text{NaCl} + \text{CaCO}_3$

3.  $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NaNO}_3$

2.  $\text{Ni}(\text{NO}_3)_2 + \text{H}_2\text{S} \rightarrow \text{NiS} + 2 \text{HNO}_3$

4.  $\text{H}_2\text{SO}_4 + \text{Mg}(\text{OH})_2 \rightarrow \text{MgSO}_4 + 2 \text{H}_2\text{O}$

### Acids with Metals Practice

For each of the following, if the metal will react with the acid, complete and balance the reaction. If the metal will not react with the acid, write "NO Reaction"

\_\_\_\_\_  $\text{Ca}_{(s)} + \text{HBr}_{(aq)} \rightarrow$  \_\_\_\_\_

\_\_\_\_\_  $\text{Ag}_{(s)} + \text{HNO}_2_{(aq)} \rightarrow$  \_\_\_\_\_

\_\_\_\_\_  $\text{Pb}_{(s)} + \text{H}_2\text{CO}_3_{(aq)} \rightarrow$  \_\_\_\_\_

### Neutralization Reaction Practice

Complete and balance the following neutralization reactions:

\_\_\_\_\_  $\text{KOH}(\text{aq}) + \text{HBr}(\text{aq}) \rightarrow$  \_\_\_\_\_ + \_\_\_\_\_

\_\_\_\_\_  $\text{HCl}(\text{aq}) + \text{Mg}(\text{OH})_2(\text{aq}) \rightarrow$  \_\_\_\_\_ + \_\_\_\_\_

\_\_\_\_\_  $\text{H}_2\text{CO}_3(\text{aq}) + \text{Ca}(\text{OH})_2(\text{aq}) \rightarrow$  \_\_\_\_\_ + \_\_\_\_\_

\_\_\_\_\_  $\text{H}_3\text{PO}_4(\text{aq}) + \text{KOH}(\text{aq}) \rightarrow$  \_\_\_\_\_ + \_\_\_\_\_

\_\_\_\_\_  $\text{H}_3\text{PO}_4(\text{aq}) + \text{Be}(\text{OH})_2(\text{aq}) \rightarrow$  \_\_\_\_\_ + \_\_\_\_\_