

Name: _____ Date: _____

Notes: Neutralization Reactions

What is the pH range of acidic solutions? _____

What is the pH range of alkaline/basic solutions? _____

What is the pH of a neutral solution? _____

How can you precisely measure the pH of a solution? _____

Litmus Paper Colors: Acids turn it _____ Bases turn it _____

How did Arrhenius define an acid? _____

How did Arrhenius define a base? _____

How did Brønsted-Lowry define an acid? _____

How did Brønsted-Lowry define a base? _____

Why is ammonia (NH_3) classified as a Brønsted-Lowry base but not an Arrhenius base?

What makes an acid or base *strong*? _____

Why are acids and bases electrolytes? _____

What safety symbol can be used on all acids and bases? _____

Naming Acids: Important Facts:

1. _____
2. _____
3. _____

Name the following acids.

1. HCl _____
2. HNO_3 _____
3. HNO_2 _____
4. $\text{HC}_2\text{H}_3\text{O}_2$ _____
5. HBr _____

Determine pH of each of the solutions below based on the concentration of H^+ ions.

- | | | | |
|--------------------------------------|------------|--|------------|
| 1. $[\text{H}^+] = 0.0023 \text{ M}$ | pH = _____ | 4. $[\text{H}^+] = 0.0032 \text{ M}$ | pH = _____ |
| 2. $[\text{H}^+] = 0.45 \text{ M}$ | pH = _____ | 5. $[\text{H}^+] = 0.0772 \text{ M}$ | pH = _____ |
| 3. $[\text{H}^+] = 0.0007 \text{ M}$ | pH = _____ | 6. $[\text{H}^+] = 0.000001 \text{ M}$ | pH = _____ |

What liquid is produced when an acid neutralizes base? _____

What is the pH of a neutralized solution? _____

What other kind of compound is produced during a neutralization reaction? _____

Determine the ions (with charges) that make each of the ionic compounds below.



cation _____

anion _____



cation _____

anion _____



cation _____

anion _____

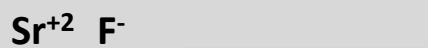
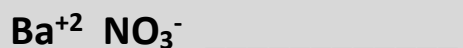
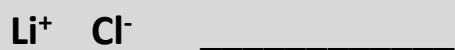
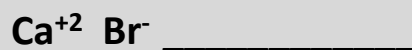


cation _____

anion _____

Which ion is always written first in the chemical formula? _____

Determine the formula of each of the salts below.



Neutralization Reaction: Important Facts

1. _____
2. _____
3. _____

For each of the neutralization reactions shown below, write the products that would be expected.

