Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What are acids and bases?**

1. A substance that tastes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, turns blue litmus to red, and reacts with metals to make \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. When acids dissolve in water, they release \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. An atom or a molecule that has lost or gained one or more electrons is a(n)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. The chemical formula of an acid often begins with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Our stomachs produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which helps digest food.
6. A substance that tastes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, is slippery to the touch, turns red litmus to blue, and dissolves \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. When bases dissolve in water, they release \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which have a(n) \_\_\_\_\_\_\_\_\_\_\_\_charge.
8. Sodium hydroxide (NaOH), also called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, is used to make textiles, detergents, and some plastics.
9. Bases react with fat to make \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**How can indicators identify acids and bases?**

1. A dye that reacts chemically with acids and bases to produce one color in acids and another color in bases is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. A low number on the pH scale indicates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The number of hydronium ions is equal to the number of hydroxiode ions in \_\_\_\_\_\_\_\_\_\_\_\_\_ solutions.
4. Mixing an acid with a base produces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water.
5. Acids and bases combined to form pH neutral solutions, a process called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. A compound that has positive and negative ions in a regular pattern or crystal is a(n)\_\_\_\_\_\_\_\_\_\_\_\_.
7. Acids, bases, and salts dissolve in water to form a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Who am I? What am I?**

Choose a word from the word box below that answers each question:

|  |  |  |  |
| --- | --- | --- | --- |
| 1. acid | 1. acidity | 1. alkalinity | 1. base |
| 1. electrolyte | 1. ion | 1. neutralization | 1. pH |

|  |  |  |
| --- | --- | --- |
| 1. |  | I can dissolve in water to form ions, which allows me to conduct electricity.  Who am I? |
|  |  |  |
| 2. |  | I have lost or gained electrons, which gives me a positive or negative charge.  Who am I? |
|  |  |  |
| 3. |  | I represent the strength of an acid. What am I? |
|  |  |  |
| 4. |  | I taste sour and turn blue litmus red. In water I produce H+ ions. Who am I? |
|  |  |  |
| 5. |  | I can tell you how acidic or basic a substance is. What am I? |
|  |  |  |
| 6. |  | I am the strength of a base. What am I? |
|  |  |  |
| 7. |  | I taste bitter and feel soapy. In water I produce OH- ions. Who am I? |
|  |  |  |
| 8. |  | I can occur when acids and bases are mixed together. What am I? |