Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

1. On the back, make three lists titled “acids”, ”bases”, ”neither”. Fill up the lists by copying the mystery numbers from things you find on the wall onto the back of this sheet.
2. Show the ionization of water:

\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ +\_\_\_\_\_\_\_\_\_\_\_

1. What is the formula and charge of hydronium?

formula: charge:

1. What is the formula and charge of hydroxide?

formula: charge:

1. Show the reaction for a H+ and water combining to form hydronium:

\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

1. Fill in the chart using the rule: **[H+] multiplied by [OH-] equals 1x10-14**

|  |  |  |
| --- | --- | --- |
|  concentration of hydronium (mol/L) | concentration of hydroxide (mol/L) |  |
| 1 x 10-10 |  |  |
| 1 x 10-5 |  |  |
|  | 1 x 10-8 |  |
| 1 x 10-7 |  |  |
| 1 x 10-3 |  |  |
|  | 1 x 10-10 |  |
|  | 1 x 10-7 |  |

1. Using page 584 from your textbook fill in the chart:

|  |  |  |
| --- | --- | --- |
| concentration of hydronium (mol/L) | concentration of hydroxide (mol/L) |  |
|  |  | coffee |
|  |  | lemon juice |
|  |  | washing soda |
|  |  | pure water |