**pH Calculations**



1. What common liquid could be represented by the arrow in the above image?

2. What terms do we use to describe the four brackets in the above image?



3. **Stomach acid** is how much more acidic than **vinegar**?

4. **Baking soda** is how much more basic than **coffee**?

5. **Drain cleaner** is how much more basic than **blood**?

6. **Lemon juice** is how much more acidic than **stomach tablets**?

7. Use the examples from the pH scale on the other side of this page to create **at least FIVE NEW pH statements**. Use the sentence structure that we have been practicing, “\_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_ times more \_\_\_\_\_\_\_\_\_\_\_\_ than \_\_\_\_\_\_\_\_\_\_\_\_.”

8. What is another term for “basic”?

9. The pH scale is not a linear scale, it is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ scale.

**pH Calculations**



1. What common liquid could be represented by the arrow in the above image?

**Water (H2O)**

2. What terms do we use to describe the four brackets in the above image?

**From left to right: Strong acids, weak acids, weak bases, strong bases.**



3. **Stomach acid** is how much more acidic than **vinegar**?

**Moving 2 units from pH 1 to pH 3, so 102 = 100.**

**Stomach acid is 100 times more acidic than vinegar.**

4. **Baking soda** is how much more basic than **coffee**?

**Moving 4 units from pH 9 to pH 5, so 104 = 10,000.**

**Baking soda is 10,000 times more basic than coffee.**

5. **Drain cleaner** is how much more basic than **blood**?

**Moving 6 units from pH 14 to pH 8, so 106 = 1,000,000.**

**Drain cleaner is 1,000,000 times more basic than blood.**

6. **Lemon juice** is how much more acidic than **stomach tablets**?

**Moving 8 units from pH 2 to pH 10, so 108 = 100,000,000.**

**Lemon juice is 100,000,000 times more acidic than stomach tablets.**

7. Use the examples from the pH scale on the other side of this page to create **at least FIVE NEW pH statements**. Use the sentence structure that we have been practicing, “\_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_ times more \_\_\_\_\_\_\_\_\_\_\_\_ than \_\_\_\_\_\_\_\_\_\_\_\_.”

**Answers will vary for this question.**

**Ex: Milk is 100,000 times more acidic than ammonia solution.**

8. What is another term for “basic”?

**Another term for basic is alkaline.**

9. The pH scale is not a linear scale, it is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ scale.

**It is a logarithmic scale.**