

# Acids, Bases, and pH Review

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T or F

An acid is a substance that produces hydrogen when exposed to water.

True

One of the defining factors of an acid is its' production of hydrogen when exposed to water.

# What is the pH scale?

- a. pH scale is what they use to gauge the severity of a chemical reaction.
- b. pH scale is what they use to measure acidity and basic-ness of a substance.
- c. pH scale is how they measure how basic a substance is, but this is not used to measure acidity.
- d. pH scale is used to judge how much of a substance is needed in baking.

b

The answer is b because pH scale is used to both gauge how basic and acidic a substance. If pH is above 7, then the substance is basic. If the pH is below 7 then the substance is an acid. If the pH is 7 then the substance is neutral.

If I have a substance that has a pH of 2, what type of substance is this?

- a. Acidic
- b. Basic
- c. Neutral
- d. Polymer

a

When we looked at the pH scale we learned that below 7 means that the substance is acidic. While the b and c are options that make sense, neutral substances have a pH of 7 and basic substances are above 7. d makes no sense as we aren't discussing polymer substances this unit.

What type of substance has more hydroxide ions than hydrogen ions?

- a. Basic
- b. Neutral
- c. Acidic
- d. None of the above



a

This is similar to how you deal with a pH question. We know that acids produce Hydrogen and that bases produce Hydroxide so since we know these two things we know that it couldn't be an acid because there are more Hydroxide ions than Hydrogen. We also know that they aren't equivalent so the solution can't be neutral. Therefore, the only answer choice that makes sense is a.

What are some properties of a base?(Choose 2)

- a. Slippery
- b. Sour
- c. Turns red on blue litmus paper
- d. Bitter

a and d

We know that sourness is a property of an acid because we know about citric acid in foods like lemons. We also know that acids are the substances that turn red on blue litmus paper. Not only that but we know that bases, like soap, are both slippery and bitter.

Therefore, the answers are both a and d.

# What do buffers do in living organisms?

- a. Creates frustration, when your computer slows down
- b. Creates an imbalance of acids and bases
- c. Create balance when your body is too acidic or basic
- d. Forces your body to absorb more bases

C

c is the correct answer because buffers are what contribute hydrogen or hydroxide ions whenever your body is imbalanced. a was an incorrect answer because although this may be true it isn't relevant to this unit. b is incorrect because it's the exact opposite of a buffers purpose. Finally, d is incorrect because buffers are used, not to absorb more, but to use what's already in your body.