

RQ Acids and Bases

Name: _____

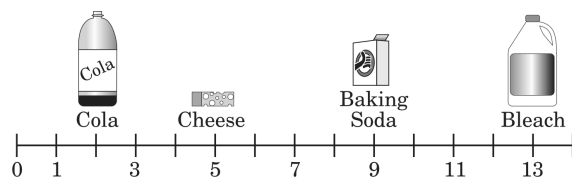
Date: _____

1. The table below shows the pH and reaction to litmus of four body fluids.

Body Fluid	pH	red litmus	blue litmus
Blood	7.4	turns blue	no change
Bile	8.2	turns blue	no change
Saliva	6.8	no change	turns red
Gastric Juice	1.7	no change	turns red

These data indicate that gastric juice is

- A. very acidic. B. very basic.
 C. positively charged. D. negatively charged.
2. This is a pH chart of common materials.



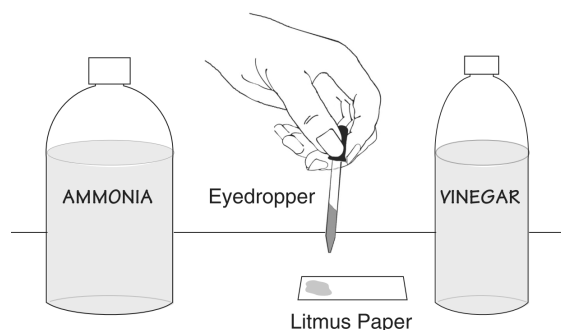
Which substance is the *most basic*?

- A. Cola B. Cheese
 C. Baking Soda D. Bleach
3. Which equation represents a neutralization (acid-base) reaction?
- A. $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$
 B. $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$
 C. $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
 D. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$

4. A student was assigned to take water samples from a lake near his home. He measured the pH of one of the water samples to be 6.0. Which of the following *best* describes this sample of water?

- A. highly acidic B. slightly acidic
 C. highly basic D. slightly basic

5. Angie is testing whether ammonia and vinegar are acids or bases. Litmus paper helps determine whether a chemical is an acid or a base. A drop of ammonia turns the litmus paper blue, and a drop of vinegar turns the litmus paper red.



Test for Acids and Bases

- A. Both of the chemicals are acids.
 B. Both of the chemicals are bases.
 C. Ammonia is an acid, and vinegar is a base.
 D. Ammonia is a base, and vinegar is an acid.

6. Bee venom contains acids and other compounds that cause the pain and itching from a bee sting. Calamine lotion, which is a mild base, helps relieve the symptoms. Which best explains how the calamine lotion relieves a bee sting?
- The calamine lotion hydrates the skin around the bee sting.
 - The calamine lotion neutralizes the acids in the bee venom.
 - The calamine lotion decreases the pH of the bee venom.
 - The calamine lotion repairs the cells damaged by the bee sting.
7. Which of the following statements explains how a buffer maintains pH when small amounts of a strong base are added?
- The salt in the buffer absorbs the base.
 - The water in the buffer dilutes the base.
 - The weak acid of the buffer neutralizes the base.
 - The weak base of the buffer neutralizes the base.

8. The table below shows the pH values of samples of substances.

Substance	pH
Rainwater	5.8
Drain cleaner	14.0
Distilled water	7.0
Soda water	3.0

According to the table, which of these substances is basic?

- rainwater
 - drain cleaner
 - distilled water
 - soda water
9. Of four different laboratory solutions, the solution with the strongest acidity has a pH of
- 11.
 - 7.
 - 5.
 - 3.
10. This chart shows the effects of several solutions on litmus paper.

Solutions and Their Effects on Litmus Paper

Solution	Effect on Blue Litmus	Effect on Red Litmus
1	None	Turns Blue
2	None	Turns Blue
3	None	None
4	Turns Red	None
5	None	Turns Blue
6	None	None
7	Turns Red	None

Which solutions are *most likely* acids?

- Solutions 1 and 3
- Solutions 2 and 5
- Solutions 3 and 6
- Solutions 4 and 7