Name Date Class

SECTION 1 Reinforcement

Acids and Bases

CHAPTER 22.1 REVIEW

Directions: *Decide whether each time listed below refers to an acid, a base, or both an acid and a base. Write your answer in the space provided using the letters in the key.*

KEY: **A** = acid **B** = base **AB** = acid and base

_____ 1. sour taste

_____ 2. bitter taste

_____ 3. produces hydrogen ions in solution

_____ 4. is often corrosive

_____ 5. is slippery

_____ 6. can cause severe burns and tissue damage

_____ 7. exists as a crystalline solid in an undissolved state

_____ 8. produces hydroxide ions in solution

_____ 9. reacts with a predictable indicator to produce a color change

_____ 10. Soaps are an example.

_____ 11. may be used to make fertilizer

_____ 12. gastric juice in stomach

_____ 13. produces hydronium ions

_____ 14. Most compounds that produce this in aqueous solution are ionic.

_____ 15. a solution that contains more H_3O^+ ions than OH^- ions.

_____ 16. HCl is an example.

_____ 17. Ammonia is a common example.

Directions: *Answer the questions on the lines provided.*

18. Use the information above to identify four properties that acids and bases have in common.

_____

19. Identify three facts about acids that are **NOT** true of bases.

_____

_____

20. Identify three facts about bases that are **NOT** true of acids.

_____

_____

Name Date Class

Chapter Review

Acids, Bases, and Salts

Part A. Vocabulary Review

Directions: *In each of the following statements, a key term has been scrambled. Unscramble each term and write it on the line provided.*

_____ 1. A substance that produces H^+ ions in solution is a(n) *dica.*

_____ 2. Solutions with ions that react with acids or bases to lessen their effects are *fubrefs.*

_____ 3. These cleansers, known as *spoas,* contain fatty acids that mix easily with dirt and oil.

_____ 4. A substance that produces OH^- ions in solution is a(n) *sabe.*

_____ 5. H_3O^+ is the notation for the *hondymuir oin.*

_____ 6. A substance that changes color in an acid or a base is a(n) *troincadi.*

_____ 7. An acid that almost completely ionizes in solution is a(n) *gronts* acid.

_____ 8. An acid that only partly ionizes in solution is a(n) *kwea* acid.

_____ 9. A(n) *trogsn seba* ionizes completely in solution.

_____ 10. A(n) *akew sabe* does not ionize completely in solution.

_____ 11. *Hp* is a measure of the hydronium ions in a solution.

_____ 12. A chemical reaction between an acid and a base is *zealuntnotiari.*

_____ 13. When the negative ions of an acid and the positive ions of a base combine, a(n) *slat* and water are formed.

_____ 14. The process in which a solution of known concentration is used to find the concentration of a second solution is called *traintiot.*

_____ 15. Substances made when sodium or potassium hydroxide reacts with fatty acids are called *spoas.*

_____ 16. Organic salts similar to soaps are *greettends.*

_____ 17. *Omimunam* salts are not formed from a metal ion.

SCIENCE 9
STUDY GUIDE
ACIDS

TRUE AND FALSE: CORRECT THE FALSE STATEMENTS.

_____1. Acids are always dangerous to handle.

_____2. A dilute acid has a small amount of acid dissolved in a large amount of water.

_____3. Lemon juice would turn blue litmus to red.

_____4. If you add sulfuric acid to magnesium metal, oxygen gas forms.

_____5. Phenolphthalein is colorless in an acid solution.

_____6. HCN could be a formula for an acid.

_____7. Vinegar would not contain an acid.

_____8. An acid solution contains an excess amount of H+ ions.

_____9. An indicator is a substance that changes color in the presence of an an acid.

_____10. The formula for sulfuric acid is HCl.

COMPLETION:

1. Acids taste_____.
2. Acids turn _____litmus paper to a _____ color.
3. Litmus paper and phenolphthalein are know as _____.
4. If an iron nail is place into a solution of hydrochloric acid, _____ gas is released.
5. When a acid destroys a metal, the process is called _____.
6. The element that is found in the formula of all acids is _____.
7. When acids are placed into water they release the _____ ion.
8. The most dangerous test for an acid would be _____.
9. What is the difference between a weak acid and a strong acid?

4. pH: ACID OR BASE?

Review and Test Questions

TRUE OR FALSE: Determine whether each of the following is true or false. For each false statement, change the underlined word(s) to the correct word(s).

1. A strong acid gives off many hydroxide ions in water.
2. The pH of a solution is found to be 5.5. This means the solution is basic.
3. A pH of 10 is more basic than a pH of 8.
4. Club soda is shown to have a pH of about 4, so club soda is an acidic solution.
5. The pH of a dilute solution of calcium hydroxide would be greater than 7.
6. The pH of a vinegar solution would be greater than 7.
7. A low pH tells you that few hydrogen ions are present.
8. As a solution gets more basic, its pH decreases.
9. Air pollution from industry often causes rainwater to become acidic.
10. Unpolluted rainwater is slightly acidic.

COMPLETION: Write in the word(s) which best complete(s) each statement.

1. You can think of pH as the_____of hydrogen ions.
2. A solution with a pH of 6 is a (strong, weak)_____ acid.
3. Methyl violet, which changes color at different pH's is known as a(n)_____.
4. The pH of pure water should be_____.
5. An electrical device which can measure the pH is called a(n)_____.
6. A_____gives off many hydroxide ions in water.
7. If you mix equal amounts of sodium hydroxide with hydrochloric acid, the pH will be_____.
8. If vinegar is added to a potassium hydroxide solution, the pH_____.
9. The pH of your blood should be between_____and_____.
10. The pH of a sample of polluted rainwater is found to be 2. This means the rain is_____.