

Assessment

Acids and Bases**Section Quiz: Properties of Acids and Bases**

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- _____ 1. A strong acid
- ionizes completely in solution.
 - produces hydronium ions in solution.
 - reacts with metals that are more active than hydrogen.
 - All of the above
- _____ 2. When a solution of hydrochloric acid, HCl, reacts with zinc, which of the following substances is a reactant?
- Cl^-
 - H^+
 - H_3O^+
 - H_2O
- _____ 3. Which of the following characteristics describes a base?
- reacts with oils in the skin and converts them to acids
 - forms alkaline solutions
 - is a nonelectrolyte
 - None of the above
- _____ 4. Which of the following substances is a weak base?
- NH_3
 - KOH
 - K_2O
 - NaOH
- _____ 5. Strong acids are
- strong electrolytes.
 - weak electrolytes.
 - nonelectrolytes.
 - nonionized.

Section Quiz, *continued*

- _____ 6. Hydroxides of Group 1 metals
- a. are all strong bases.
 - b. are all weak bases.
 - c. are all acids.
 - d. do not dissociate in solution.
- _____ 7. Strong bases are
- a. strong electrolytes.
 - b. weak electrolytes.
 - c. nonelectrolytes.
 - d. also strong acids.
- _____ 8. Which of the following is *not* a strong acid?
- a. HCl
 - b. H_2SO_4
 - c. CH_3COOH
 - d. HBr
- _____ 9. A highly polar molecule that contains a weak bond between a hydrogen atom and another element would be
- a. a weak acid.
 - b. unable to ionize completely.
 - c. a nonelectrolyte.
 - d. a strong acid.
- _____ 10. An Arrhenius acid is a chemical compound that
- a. does not conduct electricity.
 - b. increases the concentration of H^+ ions in solution.
 - c. reacts with water to remove H^+ ions.
 - d. dissociates to release OH^- ions in solution.