Name_____ **April Break Acids and Bases Review**

1. In which laboratory process could a student use 0.10 M NaOH(aq) to determine the concentration of an aqueous solution of HBr?

   A) titration
   B) chromatography
   C) evaporation of the solvent
   D) decomposition of the solute

2. In a titration, 20.0 milliliters of a 0.150 M NaOH(aq) solution exactly neutralizes 24.0 milliliters of an HCl(aq) solution. What is the concentration of the HCl(aq) solution?

   A) 0.125 M B) 0.180 M
   C) 0.250 M D) 0.360 M

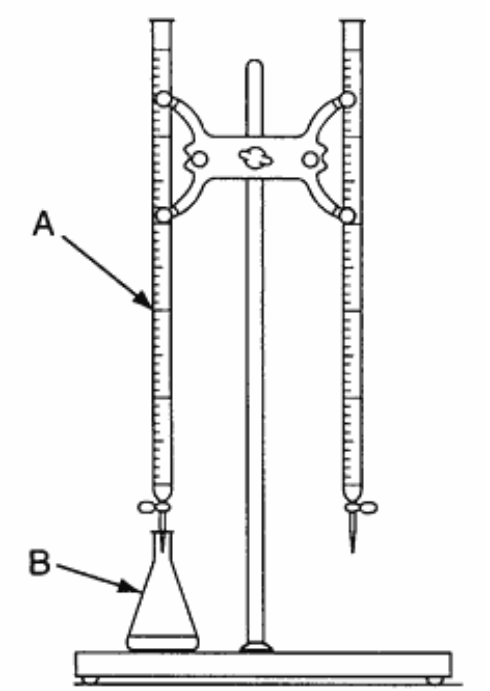
3. An acid solution exactly neutralized a base solution according to the equation acid + base $\rightarrow$ salt + water. If the neutralized mixture contained the salt KCl, the pH of the aqueous mixture would be closest to

   A) 9 B) 7 C) 3 D) 11

4. Which compound is produced when HCl(aq) is neutralized by $Ca(OH)_2(aq)$?

   A) CaH_2 B) $CaCl_2$
   C) HClO D) $HClO_2$

5. The diagram below shows a laboratory setup that can be used in a titration.



   Which pieces of equipment are indicated by arrows *A* and *B*, respectively?

   A) pipet and volumetric flask
   B) buret and volumetric flask
   C) buret and Erlenmeyer flask
   D) pipet and Erlenmeyer flask

6. According to one acid-base theory, a base is an

   A) Na^+ donor B) Na^+ acceptor
   C) H^+ donor D) H^+ acceptor

7. Compared to a solution with a pH value of 7, a solution with a thousand times greater hydronium ion concentration has a pH value of

   A) 3 B) 10 C) 4 D) 7

8. Three samples of the same solution are tested, each with a different indicator. All three indicators, bromthymol blue, bromcresol green and thymol blue, appear blue if the pH of the solution is

A) 4.7 B) 6.0 C) 7.8 D) 9.9

9. Potassium hydroxide is classified as an Arrhenius base because KOH contains

A) K^+ ions B) O^{2-} ions
C) H^+ ions D) OH^- ions

10. Which substance is an electrolyte?

A) H_2SO_4 B) $C_6H_{12}O_6$
C) SiO_2 D) CCl_4