

Unit 11 Acid-Base Properties Worksheet

Name: _____ Pd: _____

1. Compare the properties of acidic solutions and basic solutions.

Acids:

Bases:

2. How do the concentrations of hydrogen ion and hydroxide ion determine whether a solution is acidic, basic, or neutral?
3. Write the formula and name for how a hydrogen ion is sometimes written in solution. Why do we use this instead of H⁺?
4. Based on their formulas, which of the following compounds *may* be Arrhenius acids: CH₄, SO₂, H₂S, Ca₃(PO₄)₂? Explain your reasoning.

5. Classify the following as an Arrhenius acid or an Arrhenius base:

a. H₂S _____

d. H₃PO₄ _____

b. RbOH _____

e. CH₃COOH _____

c. Mg(OH)₂ _____

6. Identify the following as monoprotic or polyprotic and binary or ternary

a. HCl _____

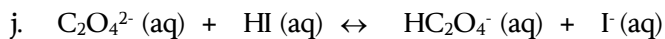
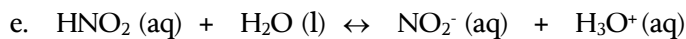
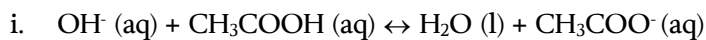
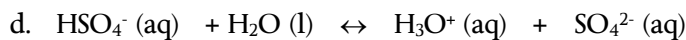
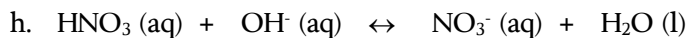
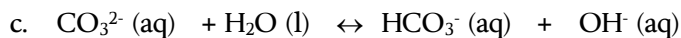
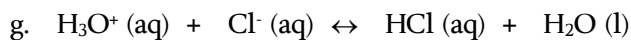
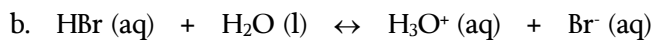
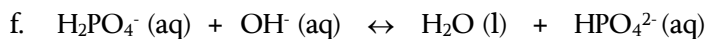
b. H₂S _____

c. H₃PO₄ _____

d. HNO₃ _____

e. CH₃CH₂COOH _____

7. Identify the conjugate acid-base pairs in the following reactions. You may use BA, BB, ca and cb.



8. Define the following vocabulary words:

a. Brønsted acid:

d. Conjugate base:

b. Brønsted base:

e. Conjugate acid-base pairs:

c. Conjugate acid:

f. Hydronium ion:

