

WS 4.5-4.6 Conjugate Acid-Base Pairs

Name: _____

1. Write the conjugate acid of the following:

- a. F⁻ b. OH⁻ c. Te⁻² d. HTe⁻ e. HCO₃⁻
 f. H₂O g. CH₃COO⁻ h. PO₄³⁻ i. CH₃NH₂ j. NH₃

2. Write the conjugate base of the following:

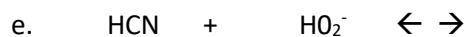
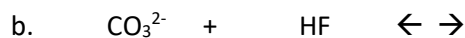
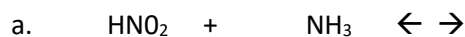
- a. HF b. HCO₃⁻ c. H₂CO₃ d. H₂O e. H₂O₂
 f. N₂H₅⁺ g. HPO₄²⁻ h. CH₃NH₂ i. HS⁻ j. HNO₂

3. a) Give a method to test for strong acids compared to weak acids

b) Name 6 common strong acids.

4. What is the most common weak base. Show the equation when it reacts with water.

5. Write the Brønsted-Lowry reaction that occurs for the following. Identify the conjugate pairs formed.



6. Which of the following pairs is the stronger acid?

- a. HIO₃ or CH₃COOH b. H₂O₂ or HSO₃⁻ c. H₂PO₄⁻ or HCN

7. Which of the following pairs is the stronger base?

- a. HCO₃⁻ or PO₄³⁻ b. HPO₄²⁻ or HS⁻ c. OH⁻ or NH₃

8. H₂Te is a stronger acid than H₂S. Write the formula for the conjugate base of each. Which conjugate base is stronger?

9. Write the equilibrium equation for the reaction. (Both are amphiprotic...use table to identify which is the stronger acid). Label Acid, Base, Conjugate Acid and Conjugate Base.

