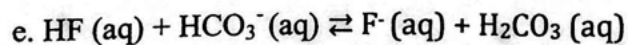
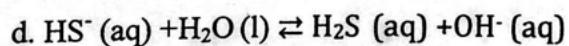
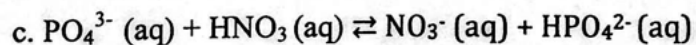
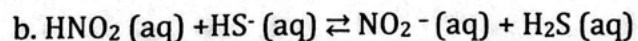
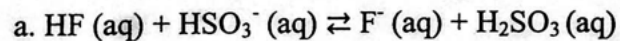


1. Identify the acid (A), base (B), conjugate acid (CA), and conjugate base (CB) in each of the following reactions:



2. Given that the K_a for acetic acid is 1.8×10^{-5} , calculate the pH of a 0.20 mol/L solution.

3. A student prepares a 0.45 M solution of a monoprotic weak acid and determines the pH to be 3.68. What is the K_a of this weak acid?

4. HF, hydrofluoric acid, is a weak acid with a K_a of 3.55×10^{-4} . What would be the pH of a solution of 1.34 M sodium fluoride? First complete the following net ionic equation:



5. Please determine whether an aqueous solution of each of the following salts will be acidic, basic, or neutral.

- a. KClO_4
- b. NaCN
- c. $\text{NH}_4\text{CH}_3\text{CO}_2$
- ~~d. AlCl_3~~
- e. NH_4ClO
- f. K_2CO_3
- g. CaBr_2
- h. NaF
- i. LiClO_4
- j. NH_4Br

6. For the following acids, please (a) rank the acidities, (b) write the conjugate base, and (c) rank the basicities of the conjugate bases. 1=least, 6=most

	HNO_2	H_2SO_4	H_2O	H_2CO_3	NH_3	HF
(a)	_____	_____	_____	_____	_____	_____
(b)	_____	_____	_____	_____	_____	_____
(c)	_____	_____	_____	_____	_____	_____