Dougherty Valley HS AP Chemistry
Acid Base Equilibrium
Quick Check #3

S-78

Name: **Date:** **Period:** **Seat #:**

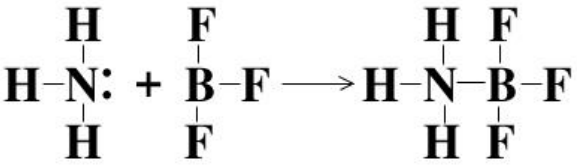
☐ **Diprotic Acids**

Sulfurous acid, H_2SO_3, is a diprotic acid. Write the step-wise dissociation equations for H_2SO_3.

	$K_{a1} = 1.5 \times 10^{-5}$
	$K_{a2} = 1.0 \times 10^{-7}$

☐ **~~Lewis Acids and Bases~~**

Consider the following picture. The Lewis acid is _____. The Lewis base is _____.



Consider the equation: $H^+ + OH^- \rightarrow H_2O$. The Lewis acid is _____. The Lewis base is _____.

☐ **Strengths of Acids**

Consider the acids: $HClO_2$, $HBrO_2$, HIO_2. Rank them from weakest to strongest.

Weakest				Strongest

Justification:

Consider the acids: HBrO, $HBrO_2$, $HBrO_3$. Rank them from weakest to strongest.

Weakest				Strongest

Justification:

Consider the acids: HCl, HBr, HI. Rank them from weakest to strongest.

Weakest				Strongest

Justification:

☐ **Diprotic Acid Calculations**

What is the $[SO_3^{2-}]$ in a 0.150 M solution of H_2SO_3? _____

Calculate the pH of a 0.150 M solution of H_2SO_3.