

Name: _____

Date: _____

Period: _____

Seat #: _____

pH's are Logarithmic

Solution A has a pH of 3. Solution B has a pH of 6. Which solution is more acidic? _____

How many times more acidic is the more acidic solution? _____

ICE Box with a Twist

A 0.10 M solution of HF has a pH of 2.10. Calculate the K_a of HF.

Strengths of Acids

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

Weakest

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 Strongest

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

Weakest

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 Strongest

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

Weakest

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 Strongest

Diprotic Acid Calculations

Sulfurous acid, H_2SO_3 , is a diprotic acid. $K_{a1} = 1.5 \times 10^{-5}$; $K_{a2} = 1.0 \times 10^{-7}$

What is the $[\text{SO}_3^{2-}]$ in a 0.150 M solution of H_2SO_3 ? _____

Calculate the pH of a 0.150 M solution of H_2SO_3 . _____