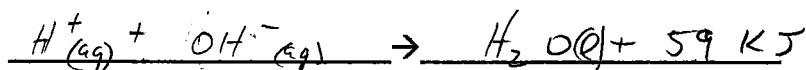
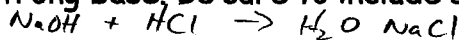


Name KJ

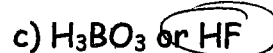
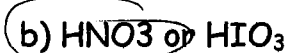
Chemistry 12

Acid/Base Basics and Kw

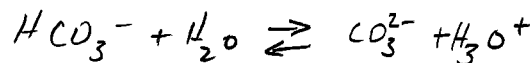
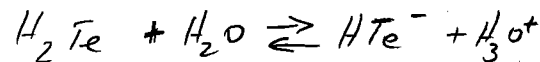
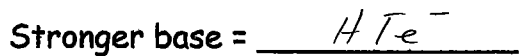
- 1.) Write the net ionic equation that occurs when any strong acid combines with a strong base. Be sure to include states! (2marks)



- 2.) Circle the member of the following pairs that is the stronger ACID. (3 marks)



- 3.) H_2Te is a weaker acid than HCO_3^- . Write the conjugate bases for both acids and write which is the stronger base. (3 marks)

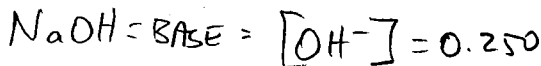


- 4.) If you cool water the value of Kw changes. Write down which way Kw will change, and explain why. (3 marks)

DOWN why?

EQUILIBRIUM WILL SHIFT TO THE REACTANTS TO PRODUCE MORE HEAT. THIS CAUSES $[\text{H}_3\text{O}^+]$ $[\text{OH}^-]$ TO BOTH DECREASE. SO K_w GOES DOWN.

- 5.) What is the $[\text{H}_3\text{O}^+]$ in a 0.250 M solution of NaOH? (Careful! NaOH is a base) (2 marks)



$K_w = [\text{H}_3\text{O}^+][\text{OH}^-] / 1.00 \times 10^{-14} = [\text{H}_3\text{O}^+][0.250]$

$[\text{H}_3\text{O}^+] = \frac{1.00 \times 10^{-14}}{0.250} = 4.0 \times 10^{-14} \text{ M}$