

IONIC EQUILIBRIA Some practice for Chapters 17-18. But do not just study this!! The answers will be posted Monday.

- Calculate the pH, pOH, $[H^+]$, $[OH^-]$ for:
 - 0.0045 M HCl
 - 0.0026 M H_2SO_4 (assume complete dissociation)
 - 8.6 M HCl
 - 0.00005 M NaOH
 - 0.00081 M $Ba(OH)_2$
 - 6.0 M NaOH
- The pH of an HCl solution is 4.62. What is the pOH, $[H^+]$, $[OH^-]$?
- The pH of a NaOH solution is 9.00. What is the pOH, $[H^+]$, $[OH^-]$?
- The pH of a 0.20 M solution of HA is 3.62. What is $[H^+]$?; K_a ?; pK_a ?; % dissociation?
- The pH of solution 0.3M in HA and 0.2 M in NaA is 5.62. What is $[H^+]$?; K_a ?; pK_a ?; % dissociation.
- What is the pH, $[H^+]$, pOH of a 0.2 M solution of the weak acid HA with a $pK_a = 5.20$?
- A solution is 0.2M in BOH and 0.3 M in BCl. $pK_b = 5.20$ for BOH. Calculate the pH, $[H^+]$, and $[OH^-]$ for the solution.
- Calculate the pH of a 0.2 M solution of the weak base BOH. $pK_b = 6.37$. Also calculate the % dissociation.
- A 0.4 M solution of a weak base has a pH of 9.82. Calculate K_b for the weak base.
- A solution is 0.2 in the weak base BOH and 0.3 M in the salt BCl. If the pH of the solution is 9.65, what is the pK_b ?
- What must be the concentration of NaA for a buffer solution that is 0.3 M in HA, $pK_a = 4.92$, to have pH = 5.00?
- What must be the molarity of the weak base BOH in a solution that has a pH = 9.60 and is 0.25 M in the chloride salt of the base? $pK_b = 4.55$
- Write the net ionic equations for the hydrolysis of:
sodium acetate, sodium chloride, ammonium nitrate and ammonium acetate
- What is the pH of a 0.5 M solution of ammonium nitrate?
- What is the pH of a 0.5 M solution of ammonium formate?
- What is the pH of a 0.5 M solution of potassium iodide?
- What is the pH of a 0.5 M solution of sodium chloride?