pH and pOH Worksheet

Name: _____
Date: _____

Answer each question as completely as possible showing all work and units!

1) The concentration of either H+ ion or the OH- ion is given for three aqueous solutions at 298K. For each solution, calculate [H+] or [OH-]. State whether the solution is acidic, basic or neutral.
   a. $[H^+] = 1.0 * 10^{-13}$ M

   b. $[OH^-] = 1.0 * 10^{-7}$ M

   c. $[OH^-] = 1.0 * 10^{-3}$ M

2) Calculate the pH of solutions having the following ion concentrations at 298K:
   a. $[H^+] = 1.0 * 10^{-2}$ M

   b. $[H^+] = 3.0 * 10^{-6}$ M

   c. $[OH^-] = 8.2 * 10^{-6}$ M

3) Calculate the pH and pOH of aqueous solutions having the following ion concentrations:
   a. $[OH^-] = 1.0 * 10^{-6}$ M

   b. $[OH^-] = 6.5 * 10^{-4}$ M

   c. $[H^+] = 3.6 * 10^{-9}$ M

   d. $[H^+] = 0.025$ M

4) Fill in the remaining boxes in the table showing all work!

[H+]	pH	pOH	[OH-]	Acid, Base or Neutral?
	8.99			
		5.06		
7.28 * 10-3 M				
			2.99 * 10-14 M	
			6.23 * 10-7 M	
	10.56			
4.61 * 10-5 M				
		12.35		