ACID SOLUTIONS WORKSHEET

Name _____

Date_____

1) What is the pH and pOH of a 1.2×10^{-3} M HBr solution?

2) What is the pH and pOH of a 2.34×10^{-5} M NaOH solution?

3) Fill in the following table

Solution	pH=5.5	pH=9.9	pH=6.6	pH=1	pH=7.4
pOH					
$[H^+]$					
$[OH^-]$					
Acidic					
Basic					
Neutral					

4) What is the $[H^+]$ of a 2.3 pH solution?

Is this acidic or basic?

If the pH increases is it becoming more acidic or alkaline?

5) What is the pH and pOH of a solution made by adding water to 15 grams of hydroiodic acid until the volume of the solution is 2500 mL?

6) What is the pH and pOH of a solution that was made by adding 400 mL of water to 350 mL of 5.0×10^{-3} M NaOH solution?

7) Calculate the molar concentration and the pH of a 12 L solution that contains 1 mole of hydrochloric acid.

8) *How many grams of HCl are needed to make 2 L of 6 M HCl? (molar mass = 36.46 g) What is the pH of this solution?*

9) *How many grams of NaOH are needed to make 1.5 L of 2 M NaOH? (molar mass = 40.00 g). What is the pH of this solution? Is it acidic or alkaline?*

10) What is the pH and pOH of a solution with a volume of 5.4 L that contains 15 grams of hydrochloric acid and 25 grams of nitric acid?

11) A swimming pool has a volume of one million liters. How many grams of HCl would need to be added to that swimming pool to bring the pH down from 7 to 4? (Assume the volume of the HCl is negligible)