

## Assignment 2: Finding pH

1. What is pH a measure of?
2. What is the equation used for finding pH?
3. What is the equation that relates to pH and pOH?
4. Complete the following table

$[\text{H}_3\text{O}^+]$	$[\text{OH}^-]$	pH	pOH	Acidic/Basic?
$1.0 \times 10^{-9} \text{ M}$				
	$4.1 \times 10^{-2} \text{ M}$			
		3.75		
			5.45	

5. What would be the **pH** of each of the following:

- |                              |       |                        |       |
|------------------------------|-------|------------------------|-------|
| a) 0.0010 M HCl              | _____ | g) 0.024 M HCl         | _____ |
| b) 0.0010 M HNO <sub>3</sub> | _____ | h) 0.075 M KOH         | _____ |
| c) 0.010 M NaOH              | _____ | i) 0.000034 M HCl      | _____ |
| d) 0.0035 M HCl              | _____ | j) 0.000000000001M HCl | _____ |
| e) 1.0 M HBr                 | _____ |                        |       |
| f) 1.0 M KOH                 | _____ |                        |       |

6. A 2.63 g NaOH are dissolved in 156 mL of solution. Determine the NaOH concentration & the pH.

7. List 3 strong acids and explain why these acids are considered strong acids.

8. List 3 weak acids and explain why these acids are considered weak acids.

9. List 2 strong bases and explain why these bases are considered strong bases.

10. List 1 weak base and explain why it is considered a weak base.