

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Chemistry**  
**Acids & Bases WS 3 – pH**

I. *Showing all work, calculate the pH from the following hydrogen ion concentrations and state whether each solution is an acid, a base, or neutral.*

1.  $[H^+] = 1.0 \times 10^{-3} \text{ M}$

2.  $[H^+] = 2.4 \times 10^{-5} \text{ M}$

3.  $[H^+] = 5.11 \times 10^{-13} \text{ M}$

4.  $[H^+] = 7.352 \times 10^{-2} \text{ M}$

5.  $[H^+] = 3.5 \times 10^{-6} \text{ M}$

6.  $[H^+] = 1.0 \times 10^{-7} \text{ M}$

7.  $[H^+] = 6.85 \times 10^{-10} \text{ M}$

8.  $[H^+] = 4.99 \times 10^{-8} \text{ M}$

9.  $[H^+] = 3.389 \times 10^{-1} \text{ M}$

II. Showing all work, **calculate the hydrogen ion concentrations** from the following pHs and state whether each solution is an **acid**, a **base**, or **neutral**.

10. 6.3

11. 8.17

12. 3.50

13. 7.00

14. 13.22

15. 7.98

16. 11.61

17. 1.671

18. 5.250