

Name Key Date \_\_\_\_\_ Period \_\_\_\_\_

Acids & Bases Ws #4: pH and pOH

1. Calculate the pH for the following solutions and identify as an acid or base

	Ion concentration	pH	Acid or Base
a.	$[H^+] = 6.5 \times 10^{-11}$	10.0	Base
b.	$[H^+] = 3.3 \times 10^{-3}$	2.5	Acid
c.	$[H^+] = 5.5 \times 10^{-6}$	5.3	Acid
d.	$[H^+] = 5.2 \times 10^{-10}$	9.3	Base

2. Calculate the pH for the following solutions and identify as an acid or base

	Ion concentration	pOH	pH	Acid or Base
a.	$[OH^-] = 3.4 \times 10^{-6}$	5.5	8.5	Base
b.	$[OH^-] = 2.6 \times 10^{-4}$	3.6	10.4	Base
c.	$[OH^-] = 8.3 \times 10^{-8}$	7.1	6.9	Acid
d.	$[OH^-] = 4.7 \times 10^{-8}$	7.3	6.7	Acid

3. Fill in the table

	pH	Acid or Base	pOH	$[H^+]$	$[OH^-]$
a.	3.80	Acid	10.20	$1.58 \times 10^{-4} M$	$6.310 \times 10^{-11} M$
b.	2.25	Acid	11.75	$5.62 \times 10^{-3} M$	$1.778 \times 10^{-12} M$
c.	13.5	Base	.5	$3.16 \times 10^{-14} M$	$3 \times 10^{-1} M$
d.	5.86	Acid	8.14	$1.38 \times 10^{-6} M$	$7.24 \times 10^{-9} M$
e.	3.90	Acid	10.10	$1.26 \times 10^{-4} M$	$7.943 \times 10^{-11} M$
f.	3.69	Acid	10.31	$2.04 \times 10^{-4} M$	$4.898 \times 10^{-11} M$
g.	6.66	Acid	7.34	$2.19 \times 10^{-7} M$	$4.57 \times 10^{-8} M$
h.	11.50	Base	2.50	$3.162 \times 10^{-12} M$	$3.16 \times 10^{-3} M$