

CHAPTER 6	Understanding pH and pOH	BLM 6.3.11
OVERHEAD		

$$\text{pH} + \text{pOH} = 14.00$$

Range of acidity and basicity	[H ₃ O ⁺ (aq)] (mol/L)	Exponential notation (mol/L)	pH (-log[H ₃ O ⁺ (aq)])	pOH (14-pH)
very acidic	1	1×10^0	0.0	14.0
	0.1	1×10^{-1}	1.0	13.0
	0.01	1×10^{-2}	2.0	12.0
	0.001	1×10^{-3}	3.0	11.0
	0.0001	1×10^{-4}	4.0	10.0
	0.000 01	1×10^{-5}	5.0	9.0
	0.000 001	1×10^{-6}	6.0	8.0
neutral [H ₃ O ⁺ (aq)] = [OH ⁻ (aq)] = 1×10^{-7} mol/L	0.000 000 1	1×10^{-7}	7.0	7.0
	0.000 000 01	1×10^{-8}	8.0	6.0
	0.000 000 001	1×10^{-9}	9.0	5.0
	0.000 000 000 1	1×10^{-10}	10.0	4.0
	0.000 000 000 01	1×10^{-11}	11.0	3.0
	0.000 000 000 001	1×10^{-12}	12.0	2.0
	0.000 000 000 000 1	1×10^{-13}	13.0	1.0
very basic	0.000 000 000 000 01	1×10^{-14}	14.0	0.0