

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