

## pH AND pOH

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The pH of a solution indicates how acidic or basic that solution is.

- pH range of 0 - 7 = acidic
- 7 = neutral
- 7 - 14 = basic

Since  $pH + pOH = 14$  if you know either the pH or pOH you can calculate the other value.

$$pH = 14 - pOH$$

$$pOH = 14 - pH$$

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$$\text{So if } pOH = 10 \text{ then } pH = 4$$

$$\text{Together } pH + pOH = 14$$

Complete the following chart.

	[H <sup>+</sup> ]	pH	[OH <sup>-</sup> ]	pOH	Acidic or Basic
1.	$10^{-1} M$	1	$10^{-13} M$	13	Acidic
2.	$10^{-2} M$	2	$10^{-12} M$	12	acidic
3.	$10^{-3} M$	3	$10^{-11} M$	11	acidic
4.	$10^{-4} M$	4	$10^{-10} M$	10	acidic
5.	$10^{-5} M$	5	$10^{-9} M$	9	acidic
6.	$10^{-6} M$	6	$10^{-8} M$	8	acidic
7.	$10^{-7} M$	7	$10^{-7} M$	7	neutral
8.	$10^{-8} M$	8	$10^{-6} M$	6	basic
9.	$10^{-9} M$	9	$10^{-5} M$	5	basic
10.	$10^{-10} M$	10	$10^{-4} M$	4	basic
11.	$10^{-11} M$	11	$10^{-3} M$	3	basic