

pH Calculations

Find the pH of the following acidic solutions:

- 1) A 0.001 M solution of HCl (hydrochloric acid).
- 2) A 0.09 M solution of HBr (hydrobromic acid).
- 3) A 1.34×10^{-4} M solution of hydrochloric acid.
- 4) A 2.234×10^{-6} M solution of HI (hydroiodic acid).
- 5) A 7.98×10^{-2} M solution of HNO₃ (nitric acid).
- 6) 12 L of a solution containing 1 mole of hydrochloric acid.
- 7) 735 L of a solution containing 0.34 moles of nitric acid.
- 8) 1098 L of a solution containing 8.543 moles of hydrobromic acid.
- 9) 660 L of a solution containing .0074 moles of hydrochloric acid.
- 10) 120 mL of a solution containing 0.005 grams of hydrochloric acid.
- 11) 1.2 L of a solution containing 5.0×10^{-4} grams of hydrobromic acid.
- 12) 2.3 L of a solution containing 4.5 grams of nitric acid.
- 13) 792 mL of a solution containing 0.344 grams of hydrochloric acid.
- 14) 100 mL of a solution containing 1.00 grams of nitric acid.
- 15) 8.7 L of a solution containing 1.1 grams of nitric acid.

Name: _____
 Hour: _____ Date: _____

Chemistry: pH and pOH calculations

Part 1: Fill in the missing information in the table below.

pH	[H ₃ O ⁺]	pOH	[OH ⁻]	ACID or BASE?
3.78				
	3.89 x 10 ⁻⁴ M			
		5.19		
			4.88 x 10 ⁻⁶ M	
8.46				
	8.45 x 10 ⁻¹³ M			
		2.14		
			2.31 x 10 ⁻¹¹ M	
10.91				
	7.49 x 10 ⁻⁶ M			
		9.94		
			2.57 x 10 ⁻⁸ M	
4.16				
	1.06 x 10 ⁻¹ M			
		3.82		
			8.53 x 10 ⁻⁷ M	
7.05				
	4.73 x 10 ⁻¹⁰ M			
		1.33		
			9.67 x 10 ⁻⁹ M	
11.68				
	9.22 x 10 ⁻⁹ M			
		12.24		
			5.39 x 10 ⁻¹² M	