

## **pH & Molarity Practice Worksheet**

[from: <http://misterguch.brinkster.net/PRA011.doc>]

- 1) What is the pH of a solution that contains 25 grams of hydrochloric acid (HCl) dissolved in 1.5 liters of water?
- 2) What is the molarity of 245.0 g of  $\text{H}_2\text{SO}_4$  dissolved in 1.00 L of solution?
- 3) What is the pH of a solution that contains 1.32 grams of nitric acid ( $\text{HNO}_3$ ) dissolved in 750 mL of water?
- 4) How many moles of  $\text{Na}_2\text{CO}_3$  are in 10.0 mL of a 2.0 M solution?
- 5) What is the pH of a solution that contains 1.2 moles of nitric acid ( $\text{HNO}_3$ ) and 1.7 moles of hydrochloric acid (HCl) dissolved in 1000 liters of water?
- 6) What weight (grams) of NaCl would be contained in 100.0 mL of a 0.20 M solution?
- 7) If a solution has a  $[\text{H}^+]$  concentration of  $4.5 \times 10^{-7}$  M, is this an acidic or basic solution? Explain.
- 8) What volume (mL) of 18.0 M  $\text{H}_2\text{SO}_4$  is needed to contain 2.45 g  $\text{H}_2\text{SO}_4$ ?
- 9) An acidic solution has a pH of 4. If I dilute 10 mL of this solution to a final volume of 1000 mL, what is the pH of the resulting solution?
- 10) What weight (grams) of KCl is there in 2.50 liters of 0.50 M KCl solution?