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**Include file name:** Chemistry\_Worksheet\_0088

Price: \$2

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**SHOW UNITS W/EACH ANSWER; EX. 409 G**

What concentration of NaOH solution was used to prepare 489.4 mL of 3.6 M NaOH if 0.039 L of the stock were used?

A solution is prepared by dissolving 51.41 g of KCl (74.551 g/mol) in enough water to make 367.3 mL of solution. What was the molarity of the solution?

28.35 g of 49.8 % Na<sub>2</sub>CO<sub>3</sub> (105.989 g/mol) solution contains what mass of Na<sub>2</sub>CO<sub>3</sub>?

If a 50.0 mL sample of ammonium hydroxide is titrated with 33.5 mL of 4.8 M sulfuric acid to a methyl red endpoint, what is the molarity of the base?  
 $2 \text{NH}_4\text{OH}(\text{aq}) + \text{H}_2\text{SO}_4(\text{aq}) \rightarrow (\text{NH}_4)_2\text{SO}_4(\text{aq}) + 2 \text{H}_2\text{O}(\text{l})$

If 25.0 mL of 2.55 M Ca(OH)<sub>2</sub> is titrated with 0.200 M HNO<sub>3</sub>, what volume (mL) of nitric acid is required to neutralize the base?  
 $2 \text{HNO}_3(\text{aq}) + \text{Ca}(\text{OH})_2(\text{aq}) \rightarrow 2 \text{Ca}(\text{NO}_3)_2(\text{aq}) + 2 \text{H}_2\text{O}(\text{l})$

What is the term that refers to liquids that dissolve completely in one another?

- immiscible
- insoluble
- soluble
- miscible
- none of the above

What mass of NaCl (58.443 g/mol) is dissolved in 281 mL of a 4.4 M NaCl solution?

34.94 g of 53.8 % Na<sub>2</sub>CO<sub>3</sub> (105.989 g/mol) solution contains what mass of solvent?

A solution of Na<sub>2</sub>CO<sub>3</sub> (105.989 g/mol) is prepared by dissolving 14.7 g of the Na<sub>2</sub>CO<sub>3</sub> in 94.1 g of water. What was the mass % of the solution?