Solution Practice Sheet

1. A solution is made by mixing 35.2 g of sodium nitrate (NaNO3) with 492 g of water to make 500. mL of solution.
   1. What is the mass percent of sodium nitrate in the solution?
   2. What is the molarity of sodium nitrate in the solution?
2. How many milliliters of a 4.25 M solution of acetic acid are required to prepare 750. mL of a 0.634 M solution of acetic acid?
3. A 25.00 mL sample of vinegar, which is an aqueous solution of acetic acid, CH3COOH, requires 23.15 mL of 0.4587 M barium hydroxide, Ba(OH)2, to reach the endpoint in a titration. What is the molarity of the acetic acid solution? Given the unbalanced equation (10 points):

2 CH3COOH (aq) + Ba(OH)2 (aq) 🡪 Ba(C2H3O2)2 (aq) + 2 H2O (l)

1. How many mL of a 1.747 M solution of silver nitrate, AgNO3, can be made from 74.83 g of silver nitrate?