## CONCENTRATIONS OF SOLUTIONS MIXED PRACTICE

**DIRECTIONS**: Answer each of the following questions using your knowledge of chemistry and the NYS Reference Tables. <u>**PLEASE SHOW ALL WORK**</u>! Express final answers to the *proper number of significant figures* and be sure to *include the proper units*.

1. How many moles of KOH are contained in 200.0 mL of a 2.0 M solution? How many grams of KOH are present?

2. A solution is made by dissolving 6.0 mL of vinegar in 294 mL of water. What is the percent by volume of vinegar in the solution?

 Determine the molarity of a solution made by dissolving 28 g HCl in 3.0 L of water. (Note: molar mass of HCl = 36.5 g/mol)

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4. A 350 g solution contains 0.0050 g NaCl. What is the concentration of NaCl in parts per million (ppm)?

5. A solution is made by dissolving 80. g KNO $_3$  in 300. g H $_2$ O. What is the percent by mass of KNO $_3$  in the solution?

6. A solution has a concentration of 6.5 ppm. How many grams of solute are dissolved in 450 grams of the solution?

7. Determine the mass of KI dissolved in 375 g of a 16% KI solution.