Solutions, Molarity, and Stoichiometry
CHM 1311.003 - Practice Questions

1. What is the molarity of a solution made by dissolving 16.0 g of calcium chloride to make 250.0 mL of aqueous solution?

2. How many grams of glucose (C₆H₁₂O₆) are needed to make 250 mL of an 0.360M solution?

3. To what volume must 25.0 mL of 18.0M H₂SO₄ be diluted to produce a 1.50M solution?

4. What is the molarity of an aqueous solution of sulfuric acid if 12.88 mL is neutralized by 26.04 mL of 0.1024M NaOH?
5. If 3.50 g of solid Mg(OH)$_2$ is added to 30.0 mL of 0.500M H$_2$SO$_4$, what molarity of Mg$^{2+}$ will result? How much Mg(OH)$_2$ will remain unreacted?

6. A 12.5 mL sample of vinegar (containing acetic acid, HC$_2$H$_3$O$_2$) was titrated using 0.504 M NaOH. If the titration required 20.65 mL of the NaOH solution, what was the molar concentration of acetic acid in the vinegar?