Concentration Units: Molarity

$$M = \frac{moles\ solute}{L\ solution}$$

1. What is the molarity of a solution prepared with 2.65 g of silver nitrate ($AgNO_3$) and then diluted with water to 500.00 mL?

2. How many g of sodium hydroxide, NaOH, are required to prepare 50.00 mL of solution that is 0.464 M NaOH?

3. How many grams of H_2SO_4 are present in 1.25 liters of a 0.855 M solution?

4. How many mL of 0.855 M K_2CrO_4 is required to prepare 25.00 mL of a solution that is 0.125 M K_2CrO_4?

5. If 72.50 mL of 2.64 M HCl is added to a 250.00 mL volumetric flask and diluted to the mark, what is the concentration of the solution?