Question 1 (3 point): Explain how you would prepare 350.0 mL of a 0.50 M sodium chloride solution.

\[
\begin{align*}
\text{0.5 moles} & \times 0.35 \text{ L} \times \frac{58.5 \text{ grams}}{1 \text{ mole}} = 10.24 \text{ g} \\
1 \text{ L} & \quad 1 \text{ mole}
\end{align*}
\]

1. Weigh out 10.24 grams of NaCl
2. Place in a 350 mL volumetric flask
3. Add a little water to dissolve and allow to come back to room temp
4. Fill to the line on the volumetric flask

Question 2 (2 points): 5.0 mL of 0.80 M sulfuric acid is diluted to a final volume of 100.00 mL, what is the concentration of the dilution?

\[
\text{M}_1\text{V}_1 = \text{M}_2\text{V}_2 \quad (.8 \text{ M})(5 \text{ mL}) = \text{M}_2 (100 \text{ mL})
\]

\[
\text{M}_2 = 0.04 \text{ M}
\]