1. 25.00 g of potassium chloride (KCl) is dissolved in enough water to make 250.0 mL of a solution with a density of 1.14 g/mL. What is the concentration of the solution in % (m/m), % (m/V), and molarity?

% (m/m): __________________
% (m/V): __________________
molarity: __________________

2. How many grams of NaNO₃ are required to make 500.0 mL of a 3.50 M solution of NaNO₃?

Answer: __________________
3. If 68.75 mL of 12.00 M HCl solution is diluted to 1000.0 mL, then what is the new concentration (in molarity)?

Answer: ________________

4. In order to make 250.0 mL of 1.25 M NaF solution, what volume of an 8.00 M NaF stock solution should be diluted to 250.0 mL?

Answer: ________________

5. What is the boiling point and freezing point of a 3.725 m CaCl$_2$ solution?

For water: $K_b = 0.512 \, ^\circ C \cdot kg \, H_2O / mol \, particles$

$K_f = 1.86 \, ^\circ C \cdot kg \, H_2O / mol \, particles$

$BP_{soln}: __________________$

$FP_{soln}: __________________$