Name $\qquad$

1. You must prepare 250.0 mL of $1.25 \mathrm{M} \mathrm{KNO}_{3}$ solution using $3.00 \mathrm{M} \mathrm{KNO}_{3}$ stock solution. How many milliliters of stock solution should you use?
2. How many grams of $\mathrm{Ca}\left(\mathrm{NO}_{3}\right)_{2}$ are needed to make 3.5 L of a 1.2 M solution?
3. Balance the equation $\quad \mathrm{Fe}+\mathrm{H}_{2} \mathrm{SO}_{4} \rightarrow \quad \mathrm{Fe}_{2}\left(\mathrm{SO}_{4}\right)_{3}+\mathrm{H}_{2}$ How many grams of iron (III) sulfate will be produced if 1.2 L of a 2.5 M solution of $\mathrm{H}_{2} \mathrm{SO}_{4}$ is reacted completely?
4. 66.4 g of Calcium Carbonate, $\mathrm{CaCO}_{3}$ are dissolved in 150.0 g of solution. What is the percent by mass?
5. Calculate the molality of a 2.3 M solution of copper II sulfate, $\mathrm{CuSO}_{4}$ in water, if the solution has a density of $1.19 \mathrm{~g} / \mathrm{mL}$.
6. Find the boiling point of the 1.45 m solution of a water solution of zinc II chloride.
