

2. What is the effect of reagent and analyte dilution on the equivalence point pH in strong acid-base titration? (5 points)
3. You collected a water sample from your shower containing 1.2 mM  $\text{Mg}^{2+}$  + 3.3 mM  $\text{Ca}^{2+}$ . Express the hardness of water in terms of mg  $\text{CaCO}_3/\text{L}$ . (FM for  $\text{CaCO}_3$  = 100.09). (5 points)