1. Calculate the isoelectric point (pl) of the following peptides:
   a. PHILLIPS
   b. MCRAE
   c. GREENE

2. Draw the peptide, STACEY. What is its net charge at pH 7.0?

3. The two C\textsubscript{\textalpha} hydrogen atoms of Gly are said to be prochiral because when one of them is replaced by another group, C\textsubscript{\textalpha} becomes chiral. Draw a Fischer projection of Gly and indicate which H must be replaced with a methyl group to yield D-Ala.

4. If you had a 200 mL solution of 2.5 mM aspartic acid, buffered at pH 2.2, how many moles of KOH are required to increase the pH to 9.3? (you may assume constant volume)