This quiz is designed to encourage you to look at protein structures. It contains 2 questions.

1. Analyze the 3D structures of the following three proteins, identified by their PDB ID numbers:

3STN, 4F4L, 6ZCT

For each of the proteins, identify the elements of secondary structure and possibly supersecondary structures, and fill out the table below.

Protein ID	# of chains	# of helices	# of beta-strands	If beta-sheets: are they parallel, antiparallel, or mixed	Did you find any supersecondary structure elements? List your findings, if any.	Molecular weight*
3STN						
4F4L						
6ZCT						

*to accurately compute the molecular weight you need to select the protein (not protein with waters or ions) and in the Action/compute menu use the option "with missing hydrogens"

2. A graduate student measured circular dichroism (CD) spectra of the three proteins; the resulting curves are shown below, labeled 1, 2, and 3. Unfortunately, the student misplaced the notebook (or maybe the dog ate it?) with the information on which spectrum belongs to which protein. Your goal is to help the student relate the CD spectra to the proteins. Some relevant information can be found on slides #21-26 of lecture 15. Your answer can be simply textual: 1 = protein X, etc. *Briefly explain your rationale.*

