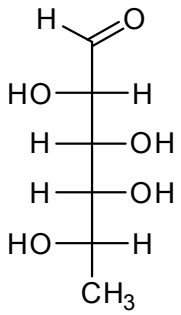
Chemistry 2302

In-Class Exercise
Drawing Cyclic Monosaccharides

L-Fucose is a sugar that is often found on cell membranes as a structural fragment of more complex carbohydrates, and is recognized by immune cells. I have drawn the Fischer projection of L-fucose on the right. In the spaces below, draw:



- A 6-membered ring (pyranose) Haworth structure of of L-fucose, as its α-anomer.

- 5-membered ring (furanose) Haworth structure of L-fucose.

- A 3-dimensional (chair) structure for the α-L-fucopyranose above.

- A 3-dimensional (envelope) structure for the L-fucofuranose above. Assume that the anomeric effect is more important than sterics.