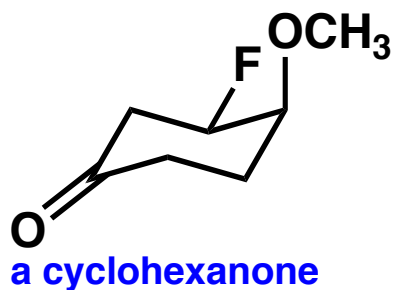
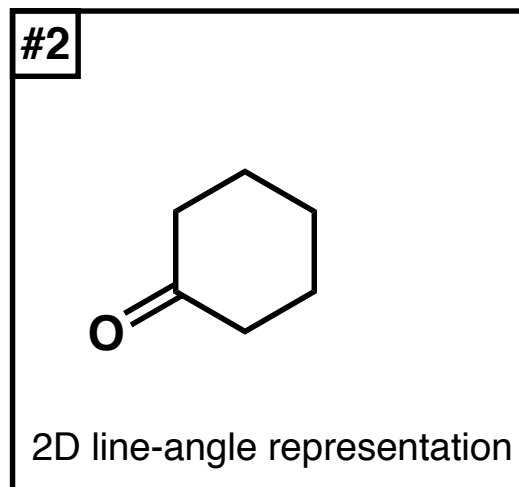
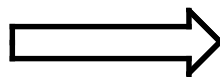
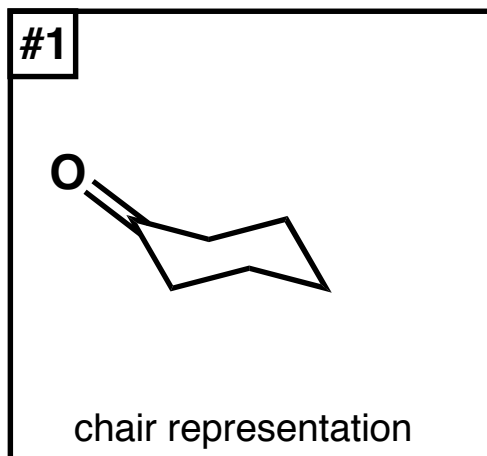


# Discussion Problem

Build a model of the cyclohexanone shown below. The structure in each box is incomplete; finish these drawings as follows. In the chair representation of the ring-flipped form (#1), show the location of the  $-F$  and  $-OCH_3$  groups.. Boxes #2 & #3 are 2D line-angle representations of the two chair forms. Use bold and dashed bonds to indicate the correct orientation of the  $-F$  and  $-OCH_3$  groups relative to the plane of paper.



ring flip  $\rightleftharpoons$



Compare the two 2D line-angle representations drawn above. Are they identical or different? If you are given a line-angle drawing of a 6-membered ring, will you be able to uniquely determine which chair form to draw?

