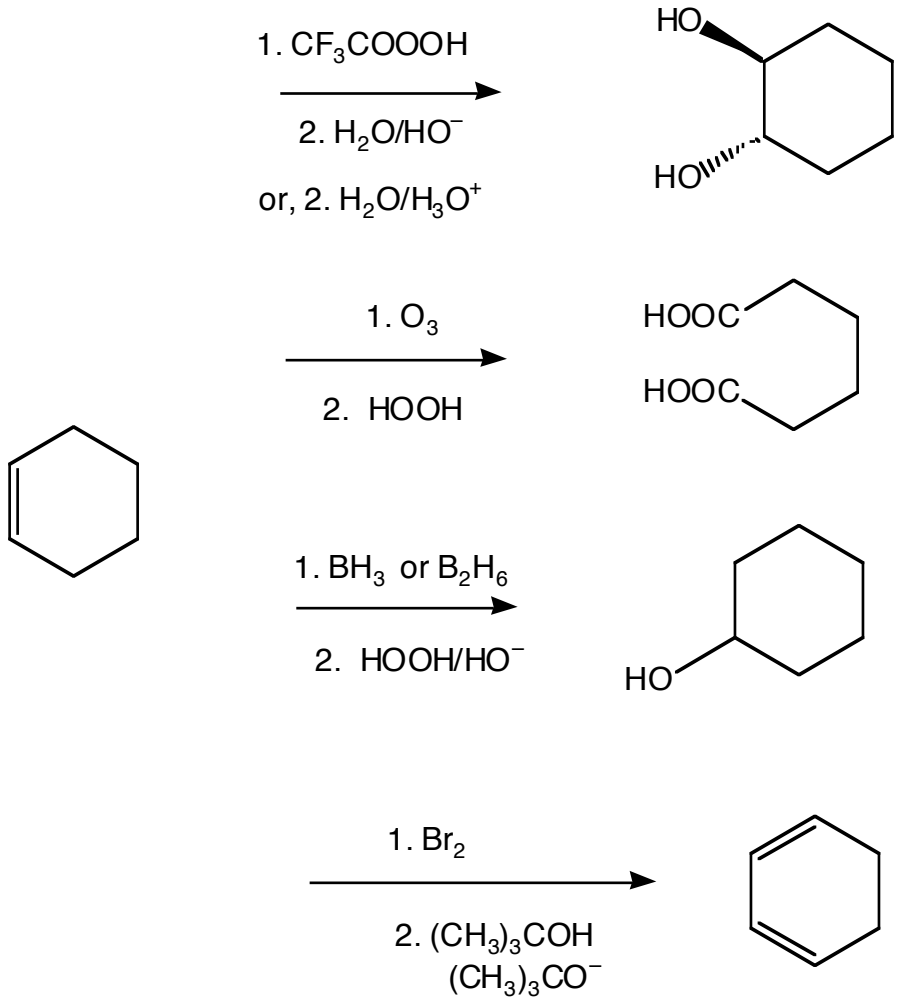
Answers to problem 77, Chemistry 301X - 2006



3b. There are, of course many ways to do each. From the top:
a) real compound will have strong OH stretch at ~3300 - 3500 cm^{-1}

b) real compound will lack the "aldehyde couplet" at 2850 and 2750 cm^{-1}

(c) real compound has no low field signal for the C=O carbon in the ^{13}C NMR spectrum (~ 200 ppm)

(d) real product has three different carbons (and three different hydrogens) whereas the wrong compound has two different carbons and two different hydrogens.