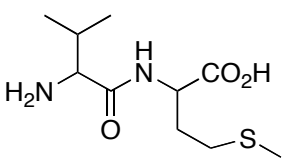
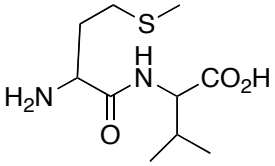
Short suggested solution
KJM3200/4200 exam, spring 2007

Exercise 1 (20 points)

As the Ala-Leu synthesis in Ege p 1005-1007



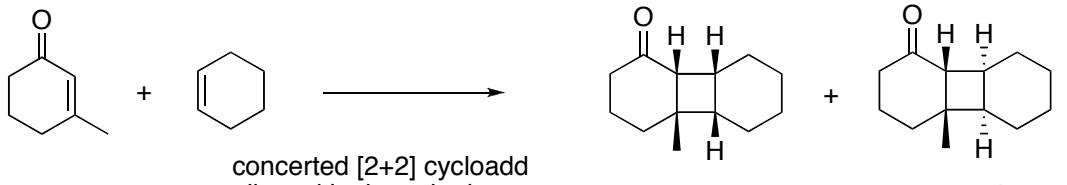
Val-Met



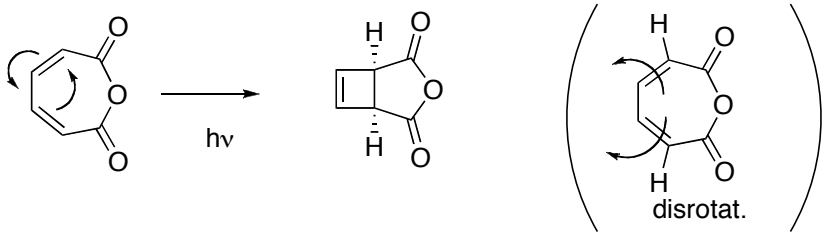
Met-Val

Exercise 2 (20 points)

a)

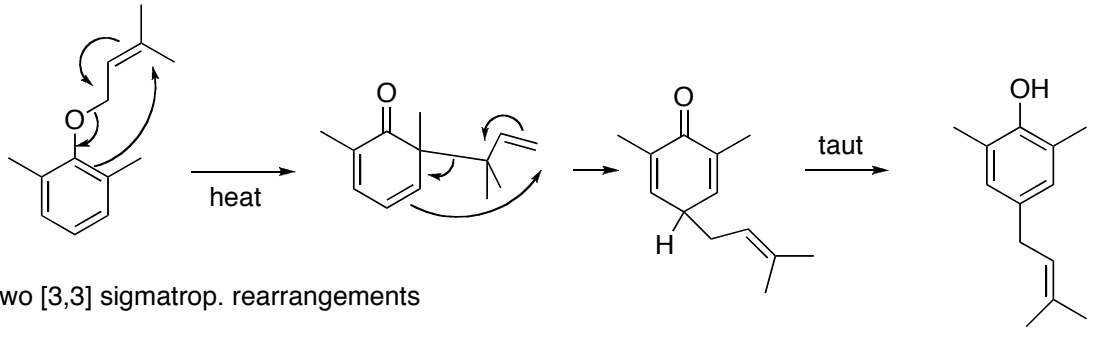


b)



[2+2] electrocyclic react, exited state, disrotatory movement

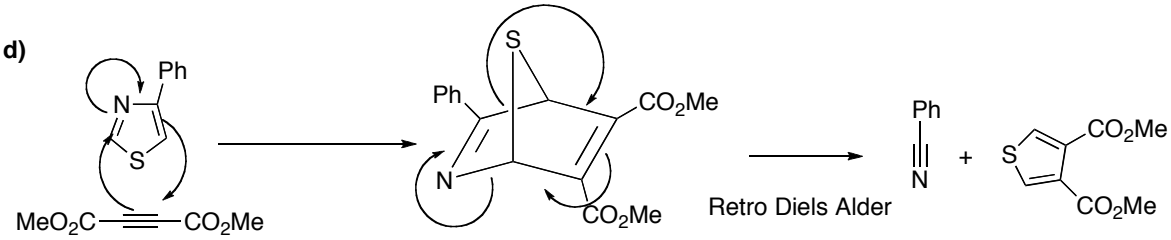
c)



Two [3,3] sigmatrop. rearrangements

c.f. McM problem 30.9

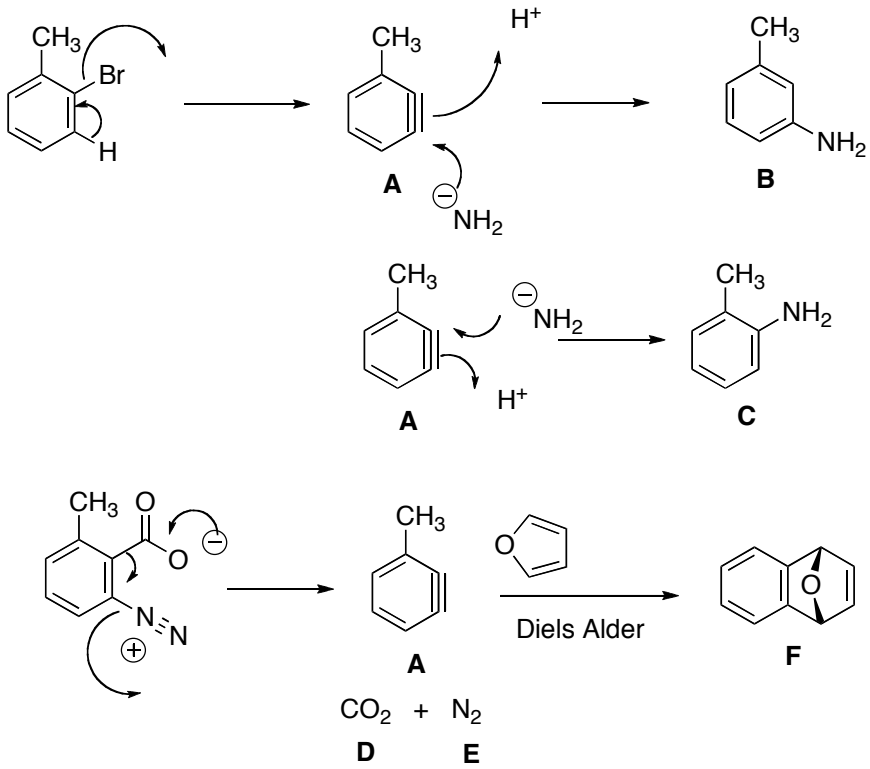
d)



[4+2] cycloadd (Diels Alder) termal cond. allowed

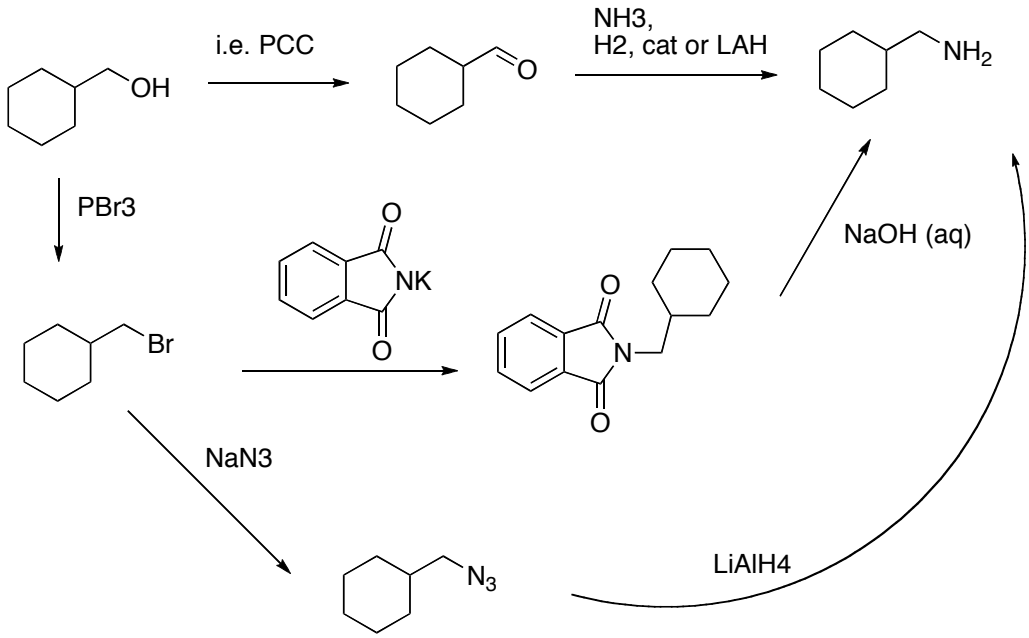
C.f. McM problem 30.30

Exercise 3 (20 points)



Exercise 4 (20 points)

For instance: Reaction of R-Br with NH3 should be avoided, difficult to stop at the primary amine. Some possible reaction sequences are shown below



Exercise 5 (20 points)

i. A and B are identical (rotamers)

ii. A/B and E are enatiomers

iii. A/B and C are anomers

iv. A/B and C are epimers (since anomers are a sub class of epimers) and A/B and D are epimers

v. No compounds