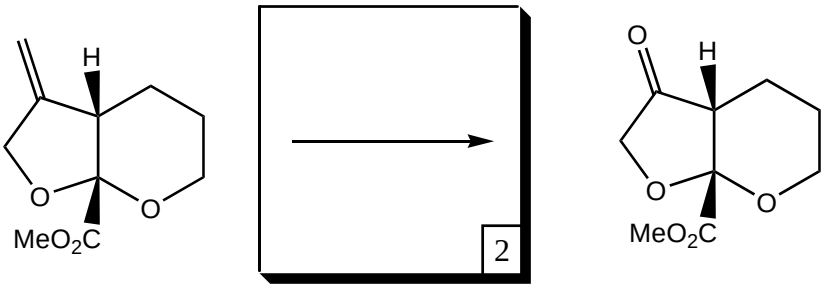
CEM 252
Summer 2006

Quiz 5 - 8 August 2006
20 points

Name_____

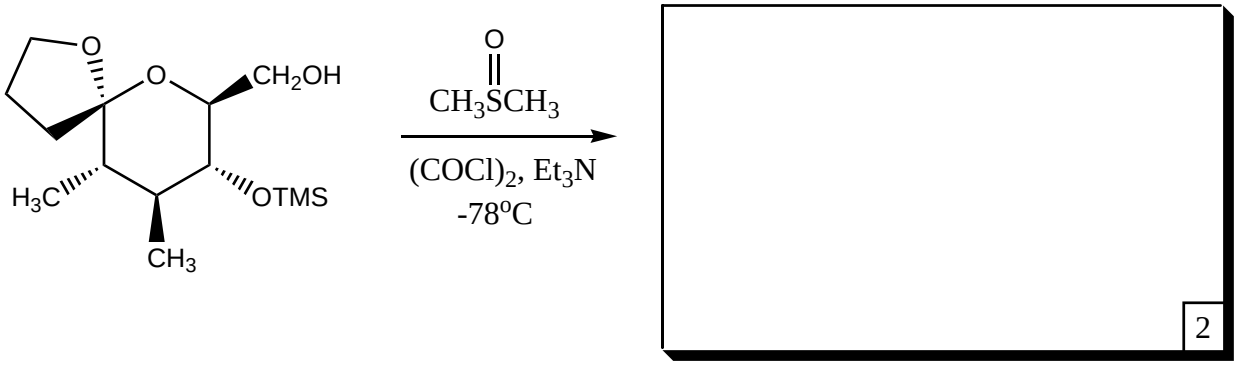
1. Complete the following reactions and classify each as *oxidation*, *reduction*, or *neither*:

a. Synthesis of the fungal metabolite *Benesudon* (*Org. Lett.* **2005**, *7*(25), 5581-5583).

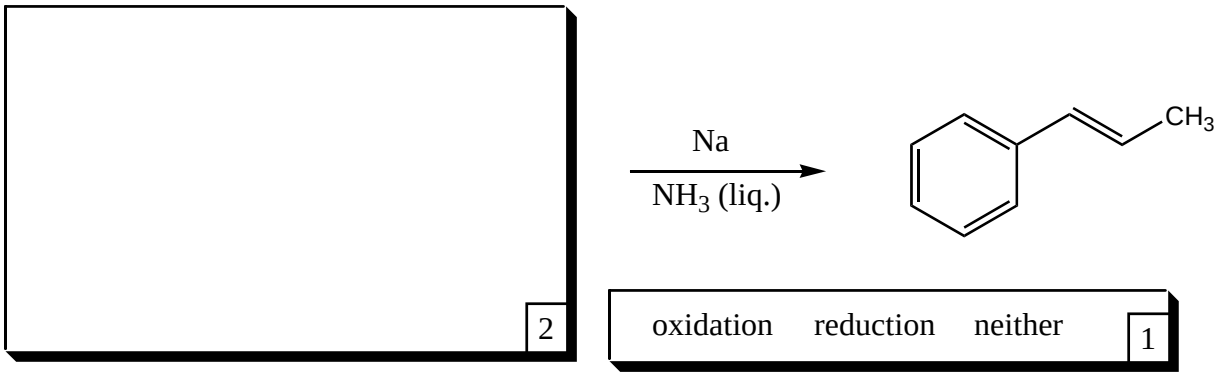


oxidation reduction neither 1

b. Synthesis of part of the neurotoxin *Ciguatoxin CTX3C* (*Tetrahedron Lett.* **2005**, *46*, 8279-8283).



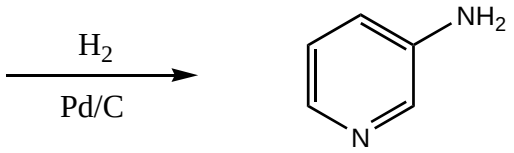
c.



oxidation reduction neither 1

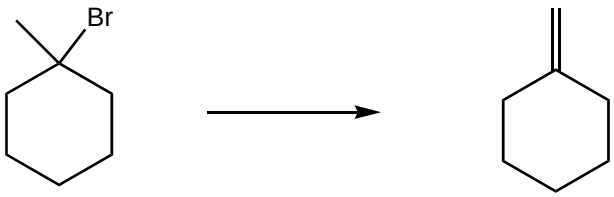
d.

2



oxidation reduction neither 1

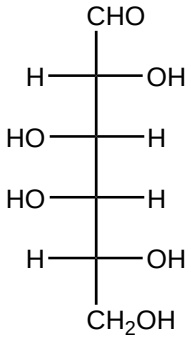
2. Propose a synthesis of methylenecyclohexane from 1-methyl-1-bromocyclohexane:



1-bromo-1-methylcyclohexane methylenecyclohexane

3

3. The Fischer projection of galactose is shown below. Determine whether this is D-galactose or L-galactose and fill in the boxes with Haworth projections of the proper pyranoses.



D-galactose
L-galactose 1

α-L-galactopyranose 2

β-D-galactopyranose 2