

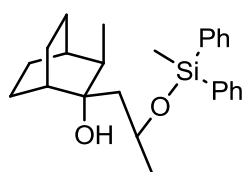
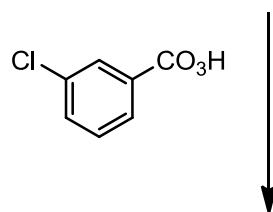
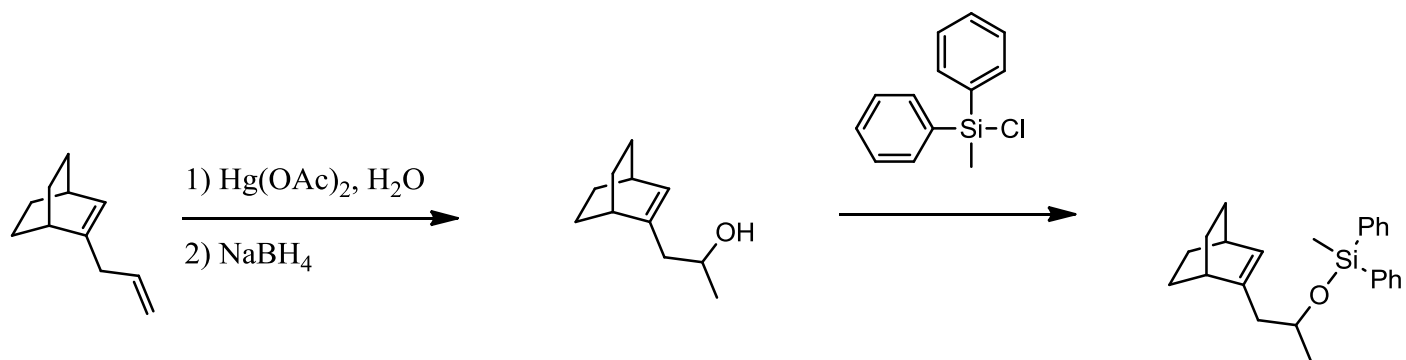
# CHEM222 and CHEM234

Midterm 2, March 15, 2013, 6:15-9:00 pm

## ANSWERS:

Question	V1	V2	V3
1	A	C	B
2	A	C	B
3	C	D	A
4	A	B	D
5	B	A	C
6	D	B	A
7	C	D	B
8	B	C	A
9	A	D	C
10	B	A	D
11	C	B	D
12	A	B	A
13	A	A	B
14	B	A	A
15	C	D	B
16	A	B	C
17	D	A	B
18	B	C	A
19	D	B	C
20	D	C	B
21	B	C	A
22	D	B	C
23	D	A	B
24	C	B	D
25	A	D	B
26	B	D	A
27	C	A	D
28	B	C	D
29	A	C	B
30	D	B	C

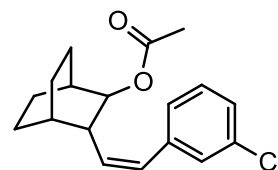
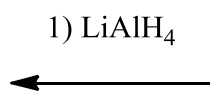
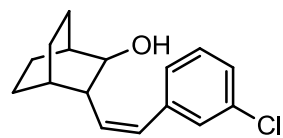
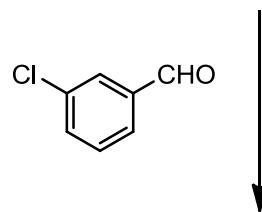
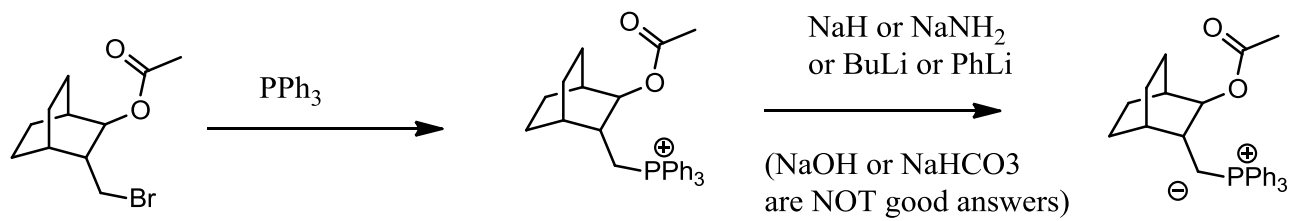




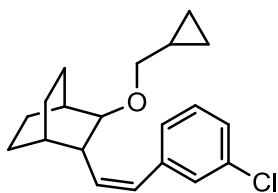
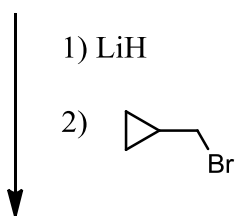
$\text{CH}_3\text{MgBr}$

Product has Me and OH ANTI  
And Me on less substituted C

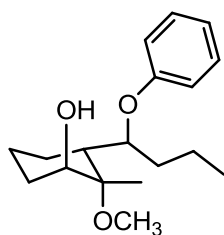
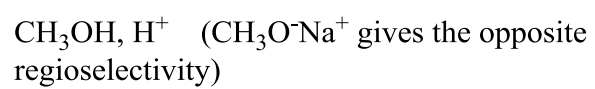
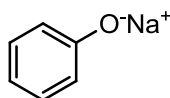
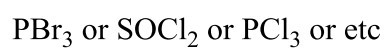
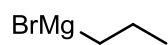
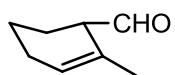
34-



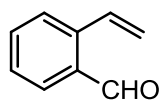
Cis double bond



35-



36-



ROH, H<sup>+</sup> (protection of aldehyde)



Hg(OAc)<sub>2</sub>, H<sub>2</sub>O

or



NaBH<sub>4</sub>



PCC or PDC



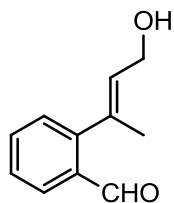
Ph<sub>3</sub>P=CH-CO<sub>2</sub>R



LiAlH<sub>4</sub>



H<sub>2</sub>O, H<sup>+</sup>



Instead, one could also use H<sub>2</sub>O, H<sup>+</sup>,  
Or one could use ozonolysis, followed by rxn with MeMgBr before PCC

one

Or one could also use Ph<sub>3</sub>P=CH-CHO followed by NaBH<sub>4</sub>  
The last step is still needed to deprotect the aldehyde