

Cumulative Examination  
Organic Chemistry

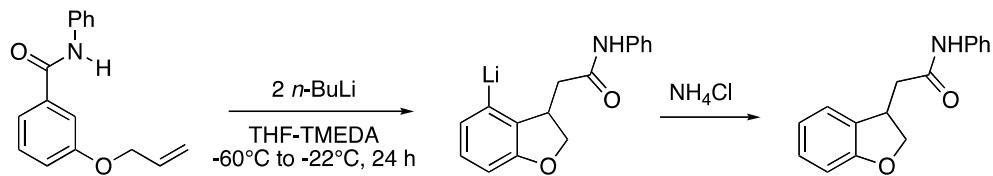
March 2, 2017

D. J. Wardrop

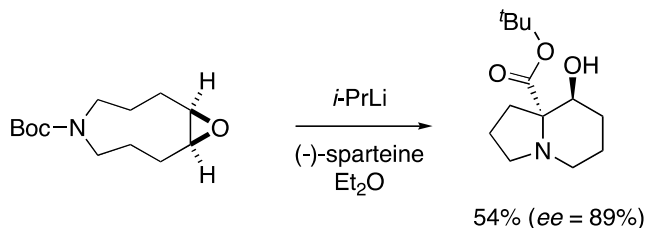
**Attempt All Questions (100 Total Points)**

### Question 1.

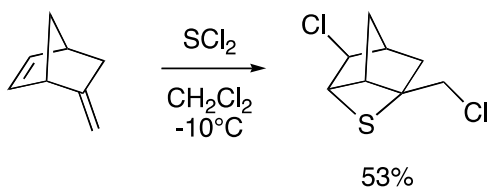
Write detailed mechanisms for each of the following transformations:



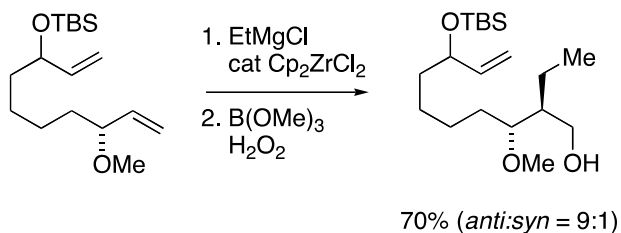
20 Points



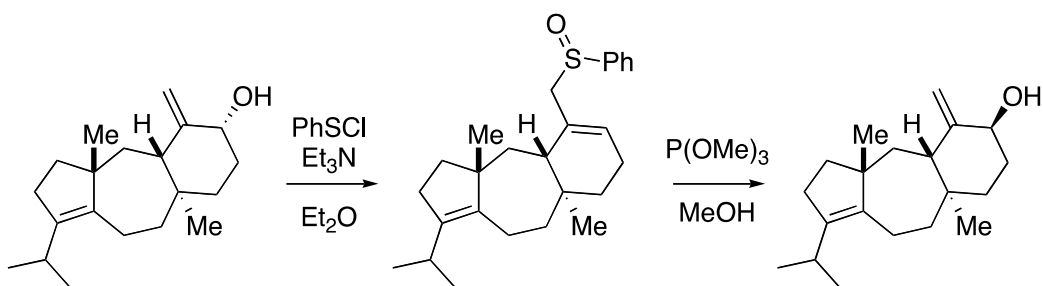
20 Points



20 Points



20 Points



20 Points

100 Total Points