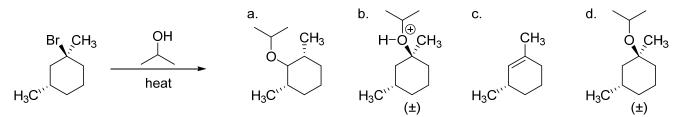
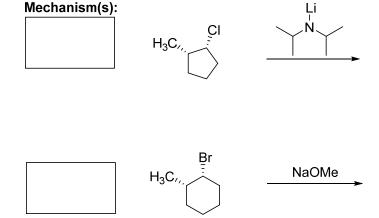
1. Circle the major product for the following S<sub>N</sub>1 reaction. (1 point)



2. Circle the major product for the following reaction. (1 point)



- 3. a. Predict the mechanism(s) for following reactions.
  - b. Provide the expected major product(s). If there is one than one possible mechanism, draw the expected **major** product for **each** mechanism. (4 points)



4. Provide a mechanism for the following reaction. (4 points)

$$H_3C_{\prime\prime}$$

HO  $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$