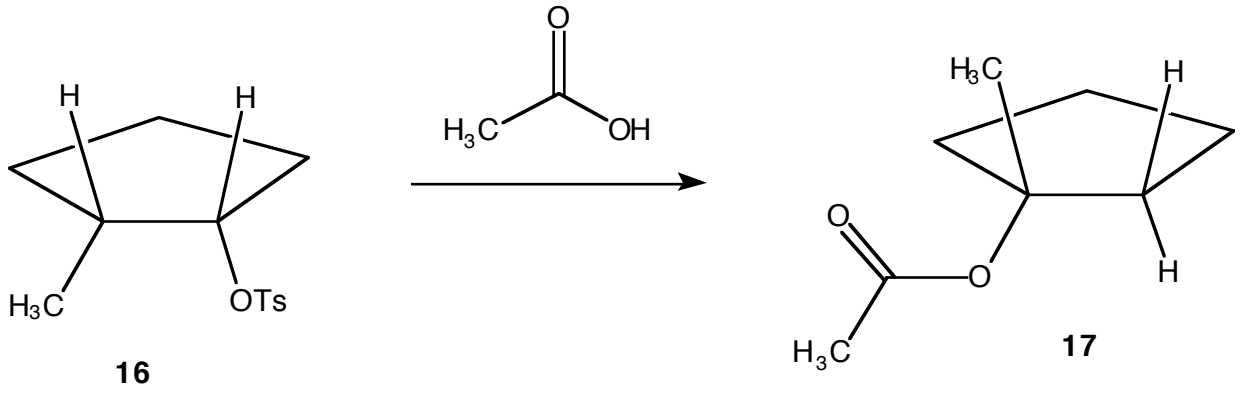
Problem 69, Chemistry 301X - 2006

Treatment of tosylate **16** in acetic acid lead to substantial amounts of a rearranged acetate product, **17**.

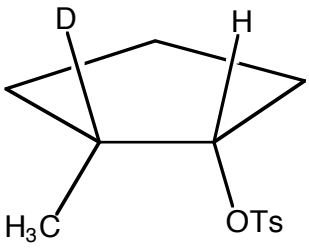
(a) Write a mechanism for the formation of **17**, taking account of the following information:

Compound **16-d** reacts more slowly than **16**. Please note that the carbon-D bond is a little stronger than the carbon-H bond.

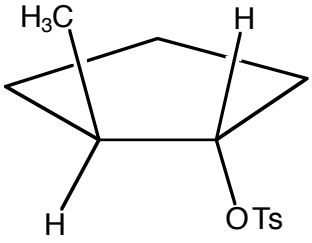
(b) MJ claims that **18**, and **18-d**, stereoisomers of **16** and **16-d**, would not show this behavior and would react at essentially the same rate. Explain.



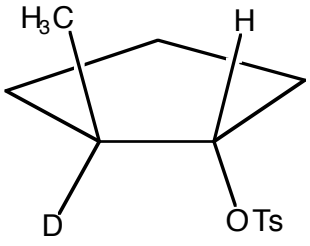
16 **17**



16-d



18



18-d