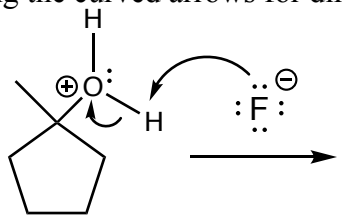
Problem Set Chapter 6

Organic Chemistry for Life Sciences: CHM 223 Section A

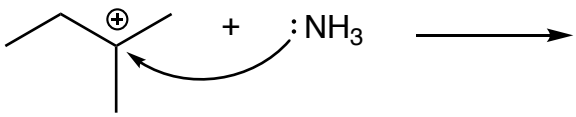
Name_____

DUE: Wednesday November 1 @ 8am

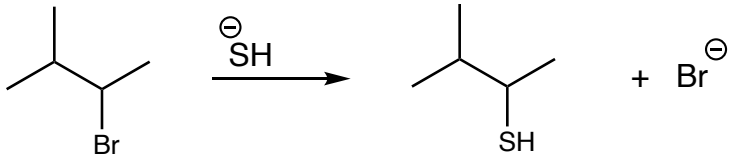
1. Using the curved arrows for direction, predict the product of the following reaction step:



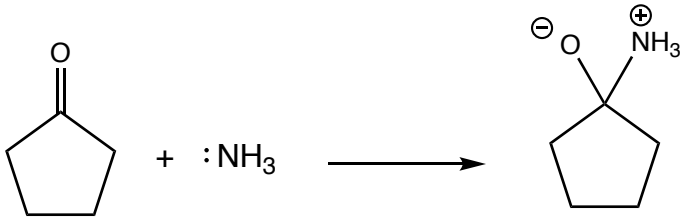
2. Using the curved arrows for direction, predict the product of the following reaction step:



3. Provide proper curved arrows to describe the reaction step below (HINT: first add all missing lone pairs of electrons!)

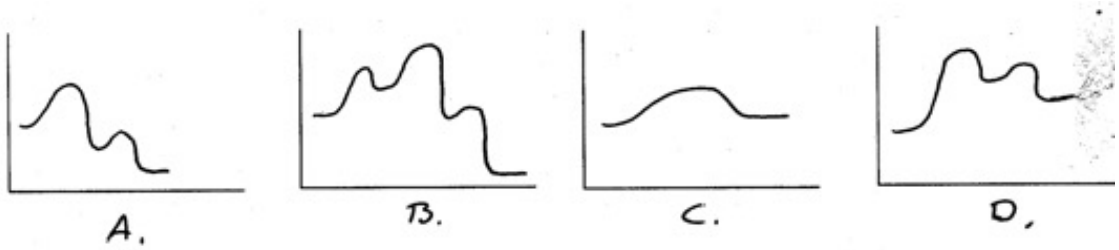


4. Provide proper curved arrows to describe the reaction step below (HINT: first add all missing lone pairs of electrons!)

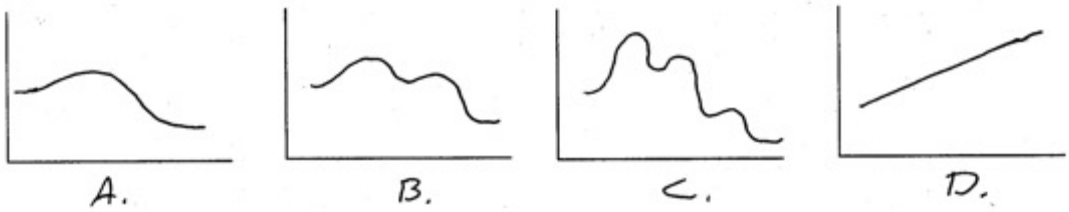


5. Predict the structure of the transition state for the reaction described in problem 1 using all proper conventions. Indicate which bonds are forming and which are breaking and include appropriate partial charges as necessary.

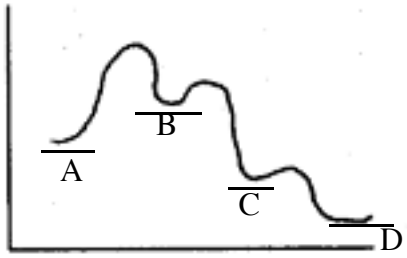
6. Which of the following is an energy diagram for a three step reaction?



7. Which of the following energy diagrams is of a reaction with one transition state?



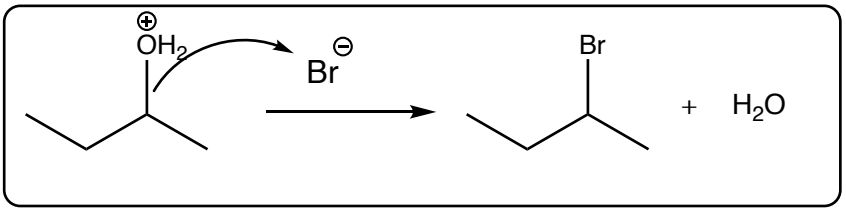
8. Which step is the rate determining step in the reaction below?



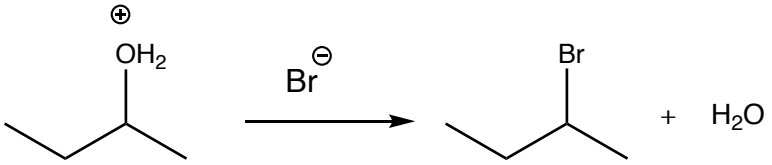
A. C —> B
B. B —> C
C. A —> D
D. A —> B
E. C —> D

9. Jimmy draws curved arrows for the reaction below as shown (while murmering under his breath that he'd like to see the arrow heading towards Breton's fat nose). Is Jimmy correct or is there a better way in which to describe the reaction? Provide correct curved arrows if you think Jimmy is incorrect.

Jimmy



Jimmy's Answer



correct curved arrow drawing?