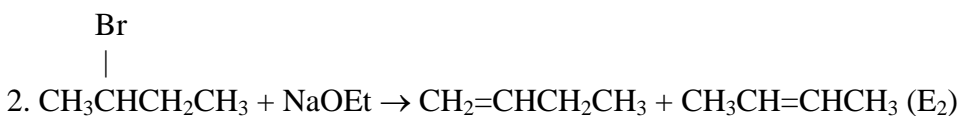
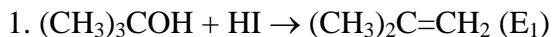


\*II-3c \_\_\_\_ C \_\_\_\_ NC  
\*\*II-1b \_\_\_\_ C \_\_\_\_ NC

**Chemistry 251**  
**Worksheet 6**

Name: \_\_\_\_\_

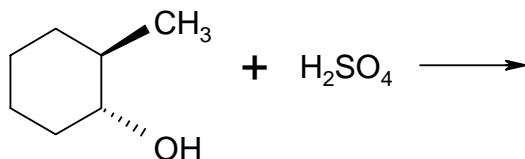
\*A. (2.0 pts.) Given the following reactions, write equations that illustrate the mechanism for that reaction.



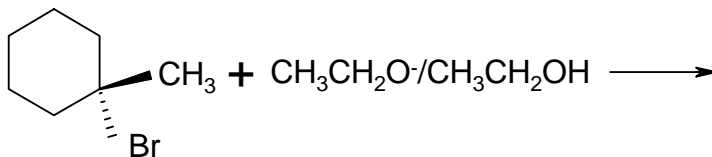
B. (6.0 pts.) Predict the product(s) expected for each of the following reactions. Be sure to consider rearrangements and geometric isomers where applicable. If more than one product is possible, indicate the major product.



2.



3.



C. (1.5 pts.) Give the structure for each of the following compounds.

1. (Z)-4-methyl-2-pentene.
2. (E)-3-methyl-2-hexene.
3. 1-heptene

D. (0.5 pts.) Circle the most stable of the compounds in problem C.

E. (1.0 bonus pts.) Compound A (C<sub>4</sub>H<sub>10</sub>) gives two different monochlorides on photochemical chlorination. Treatment of either of these monochlorides with potassium tert-butoxide in DMSO gives the same alkene B (C<sub>4</sub>H<sub>8</sub>) as the only product. Give the structure of the alkane A and the alkene B.