CHM 2210 Name: _____
CH 6 HW

I. Write the following definitions/structures

a. Alkene

b. Olefin

c. Unsaturated

d. Saturated

e. Sigma Bond

f. Pi Bond

g. Vinyl position

h. Cis alkene

i. Trans alkene

j. E geometry

k. Z geometry

l. Cahn-Ingold-Prelog rules

m. Hyperconjugation

n. Electrophilic addition reactions

o. Regioselective

p. Regiospecific

q. Markovnikov's rule

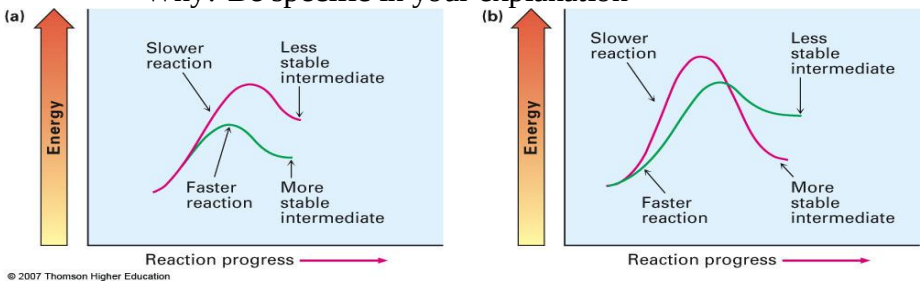
r. Non- Markovnikov's rule

s. The Hammond Postulate

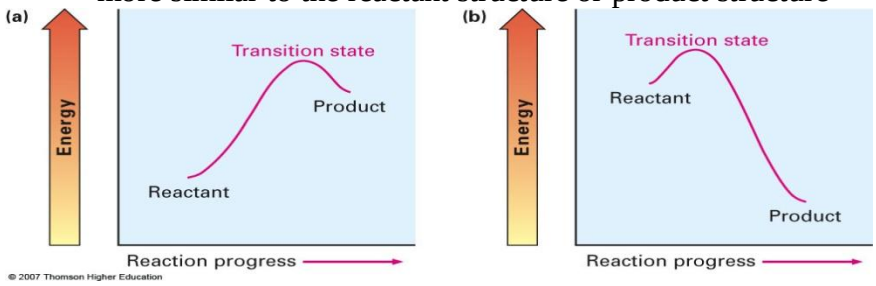
t. Carbocation rearrangements

II. If a carbocation intermediate is more stable than another, why is the reaction through the more stable one faster?

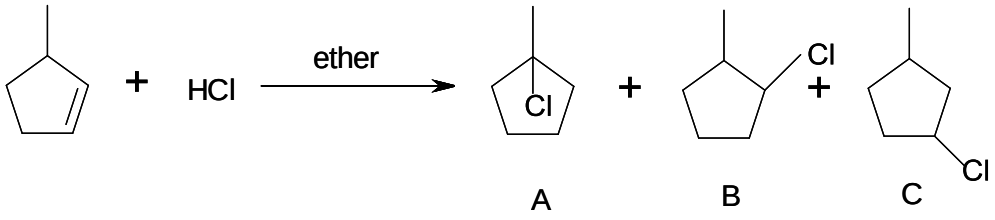
III. Which of the following energy diagrams represents the typical reaction situation? Why? Be specific in your explanation



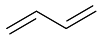
IV. For both energy diagrams explain why the structure of the transition state would be more similar to the reactant structure or product structure

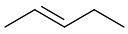


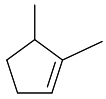
V. Looking at the following reaction, how is it possible to get product A?

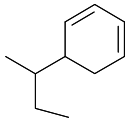


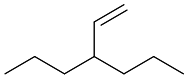
VI. Name the following

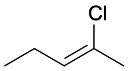
a. 

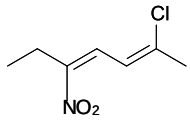
b. 

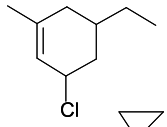
c. 

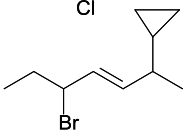
d. 

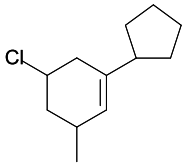
e. 

f. 

g. 

h. 

I. 

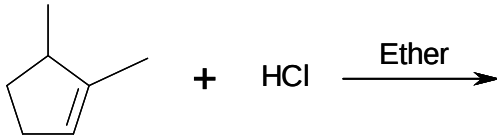
j. 

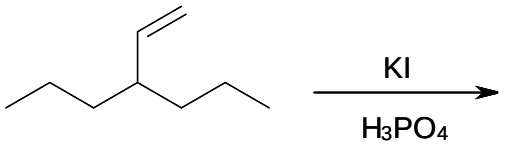
VII. Draw the following

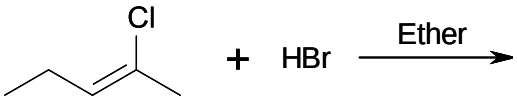
a. 1-Hexene
b. (Z)-3-Hexene
c. 3-Ethyl-6-isopropyl-2,4-cyclohexadiene
d. (Z)-4,6-Diethyl-2-isopropyl-4-methyl-2-heptene
e. 4-(2,3,5-Trimethylcyclohexyl)-2-hexene
f. 2,4,4-Trimethyl-2-hexene
g. (E)-2-Bromo-3-chloro-2-pentene
h. 1,3-Cyclopentadiene
i. 3-(1-propylpentyl)cyclopentene
j. 4,7-Dimethyl-2,5-octadiene

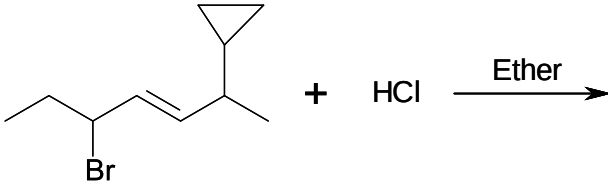
VIII. Write the products for the following reactions

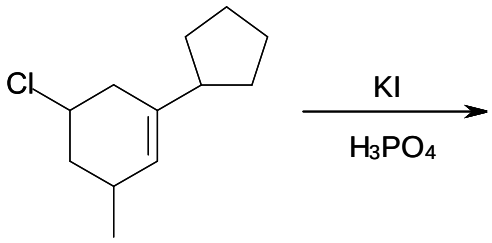
a. 

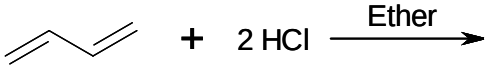
b. 

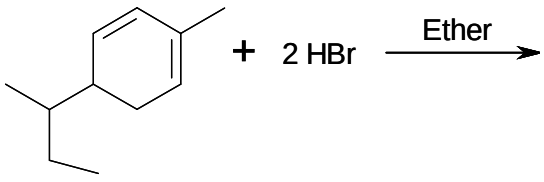
c. 

d. 

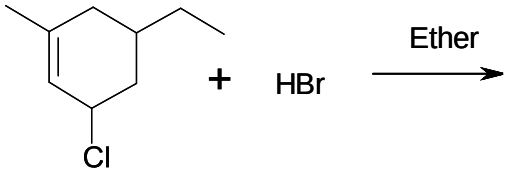
e. 

f. 

g. 

h. 

IX. Draw the complete mechanism for the following reactions

a. 

b.