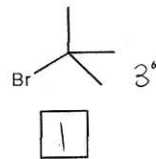
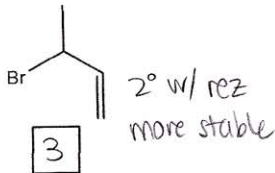
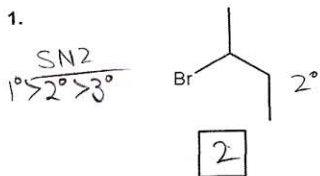


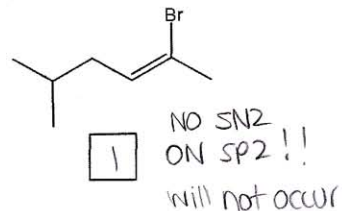
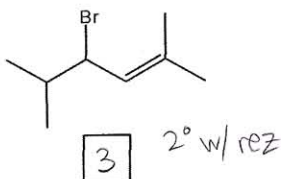
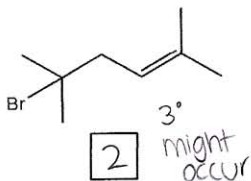
Chapter 6 Worksheet 2

Place the following compounds in order of increasing reactivity in an SN2 process. (3=highest, 1=lowest)

1.

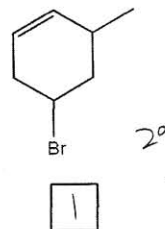
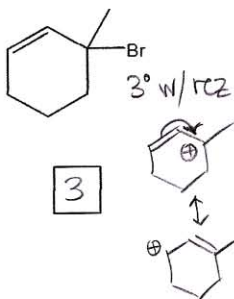
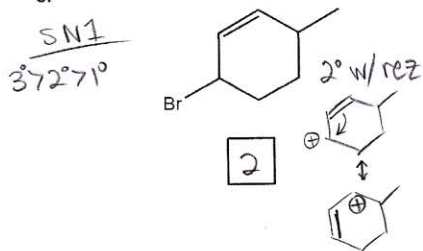


2.



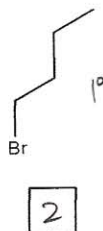
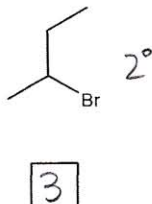
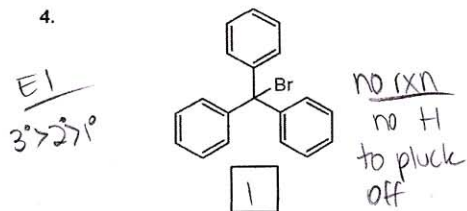
Place the following compounds in order of increasing reactivity in an SN1 process. (3=highest, 1=lowest)

3.

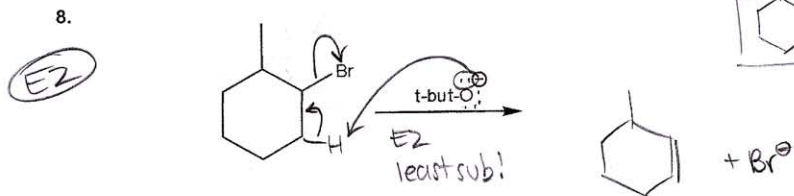
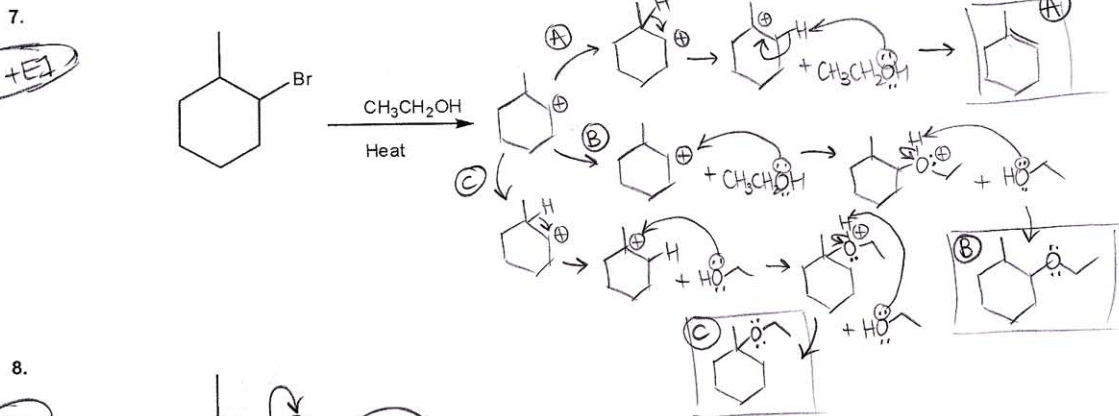
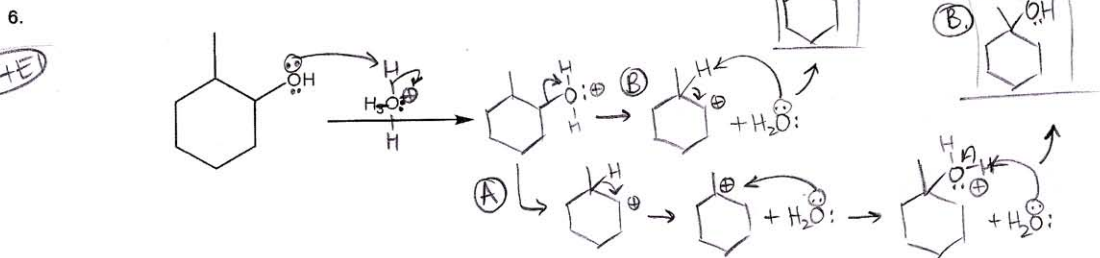
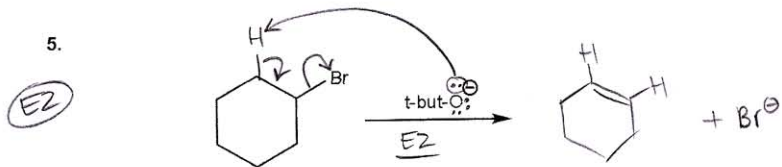


Place the following compounds in order of increasing reactivity in an E1 process. (3=highest, 1=lowest)

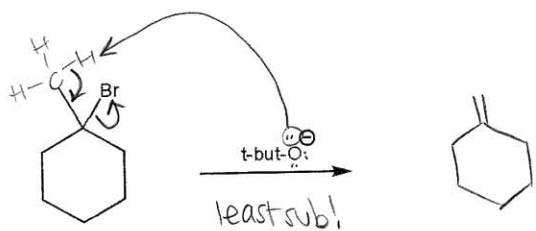
4.



Show the mechanism for the reaction shown below. Used curved arrows to indicate "electron flow". Remember to show one step at a time. Show all intermediates and formal charges. Do not show transition states! Be sure to include ALL products formed during the reaction.

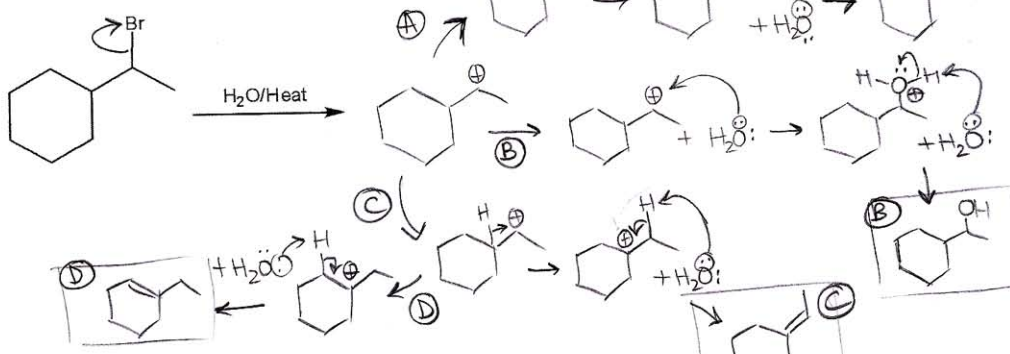


9.  
E2

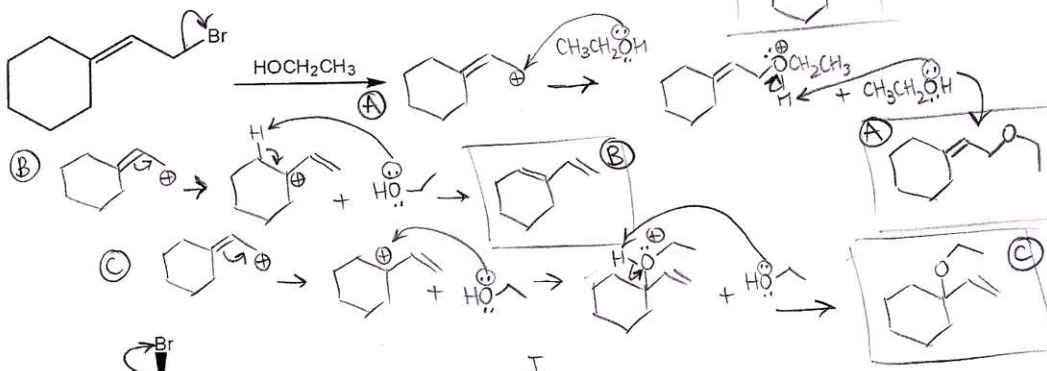


least sub!  
no stereochemistry  
so no need to  
check if its  
trans-diaxial

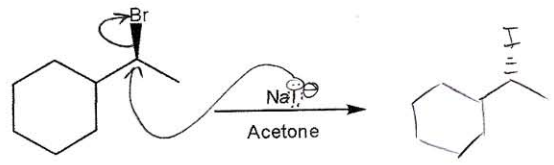
10.  
S<sub>N</sub>1 + E1



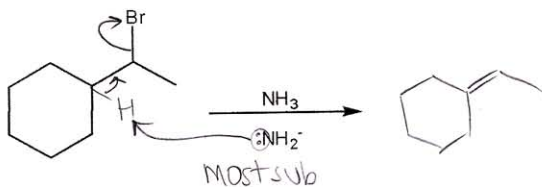
11.  
S<sub>N</sub>1 + E1



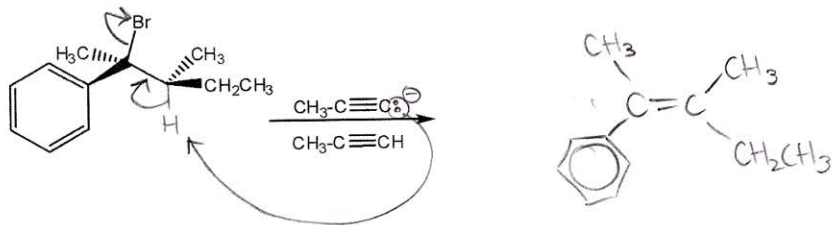
12.  
S<sub>N</sub>2



13.

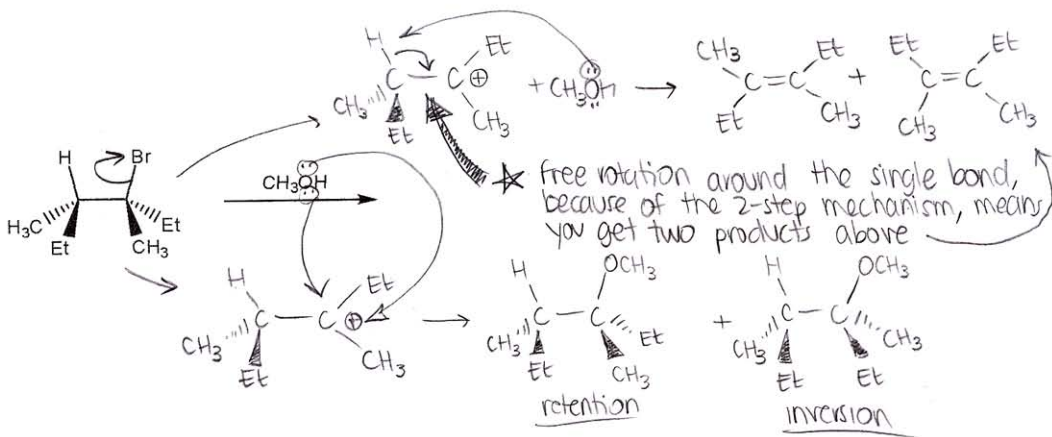


14.



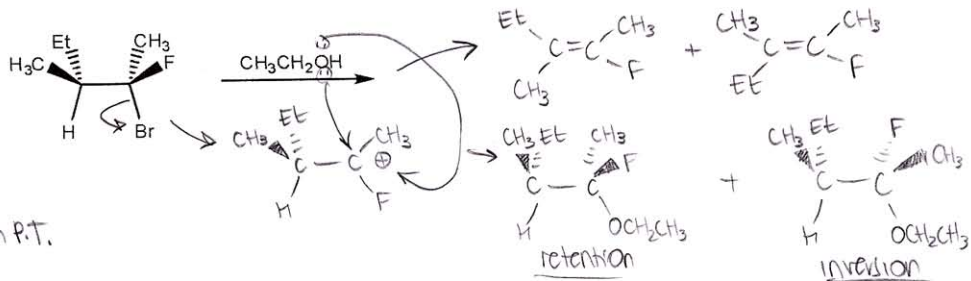
15.

(S<sub>N</sub>1 + E1)

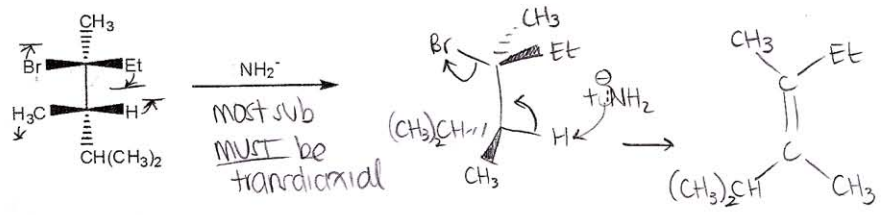


16.

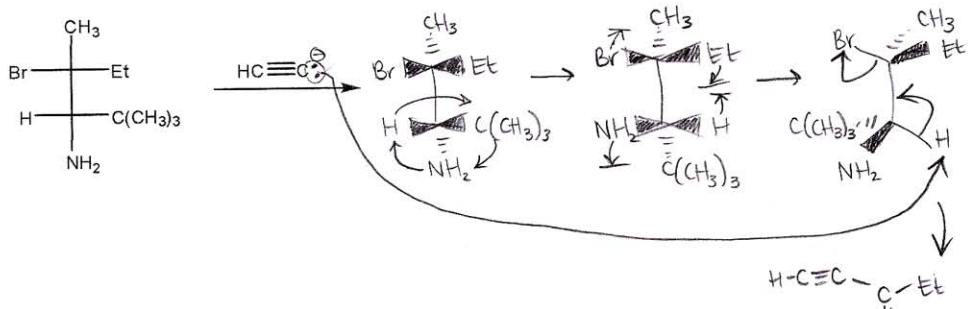
$\text{Br}^-$  is more stable than  $\text{F}^-$   
 recall stability increases on P.T.



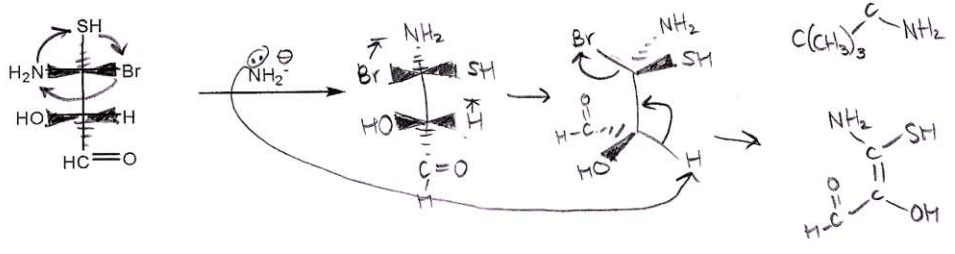
E2 17.



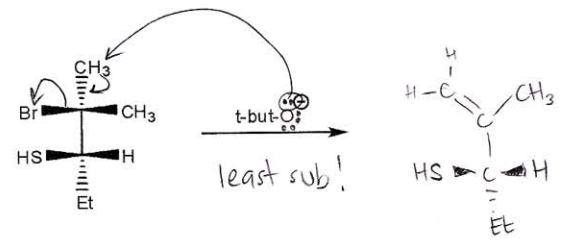
E2 18.



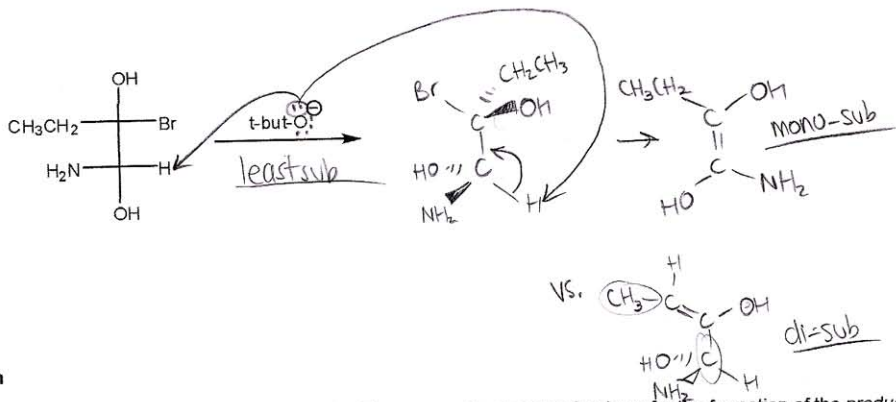
E2 19.



E2 20.

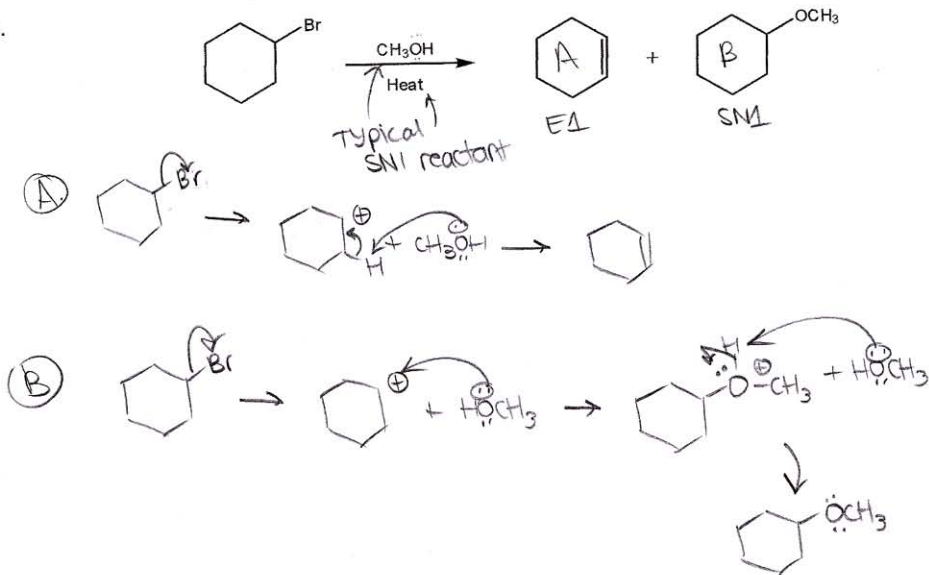


21.

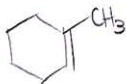
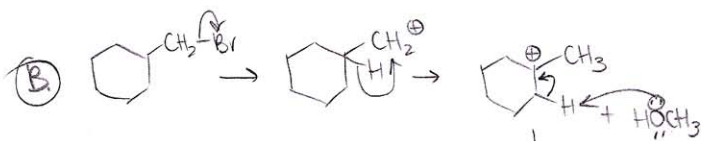
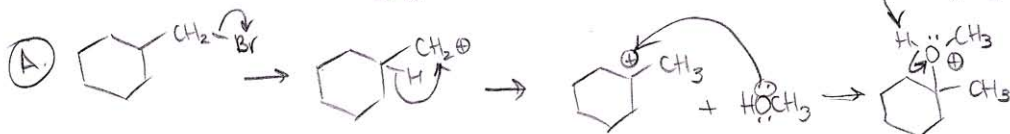
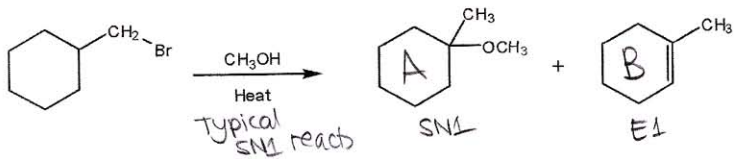
**Mechanism**

The following reaction produces a mixture of products. Please provide clear mechanisms for the formation of the products shown. Use curved arrows to indicate electron flow, and show all intermediates and formal charges.

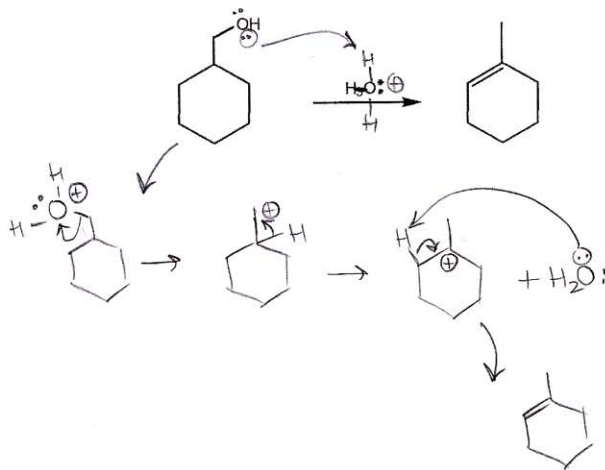
22.



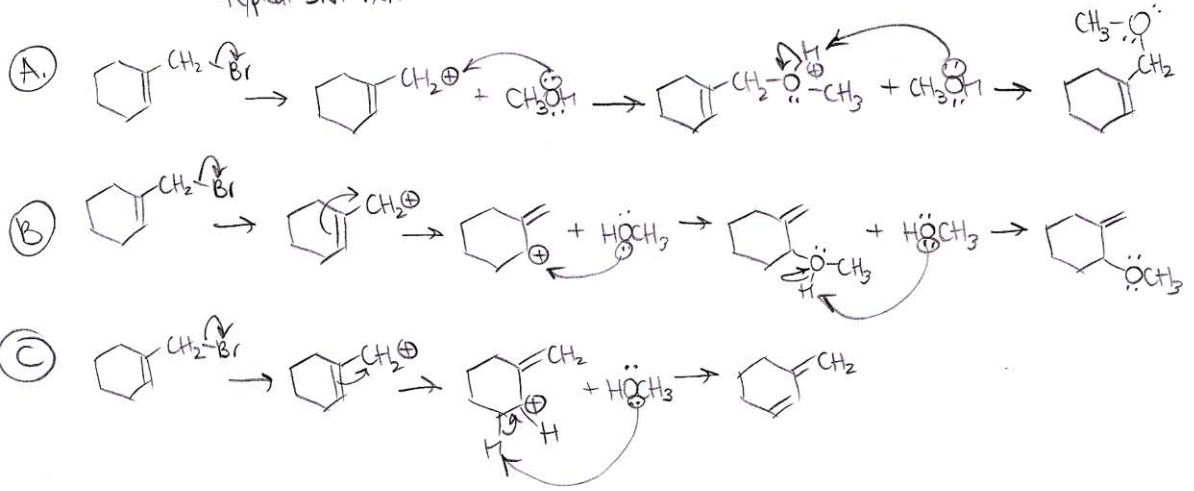
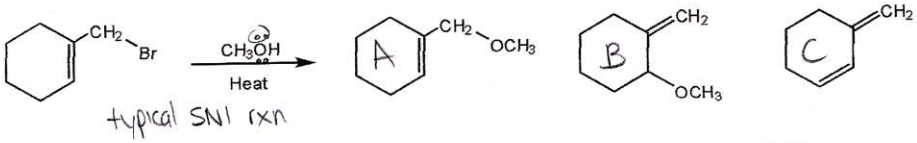
23.



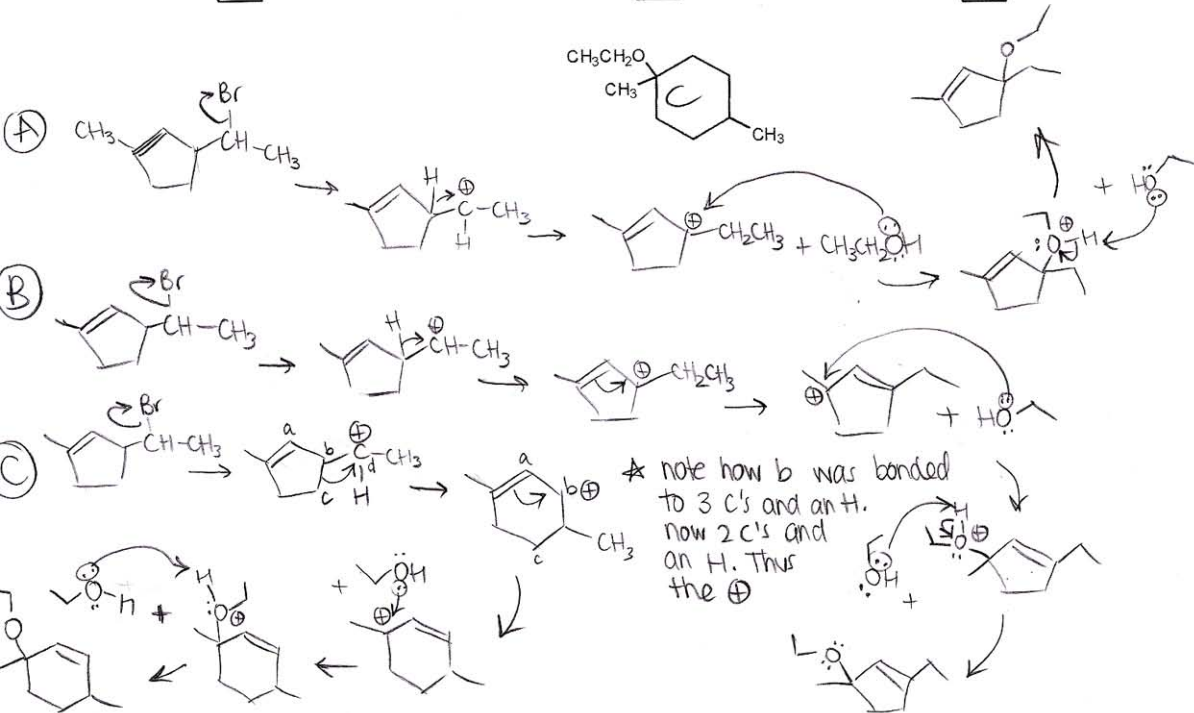
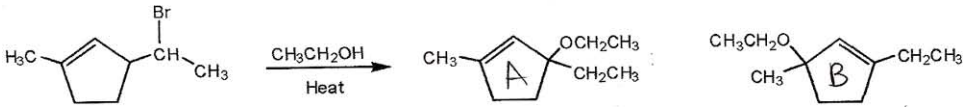
24.



25.

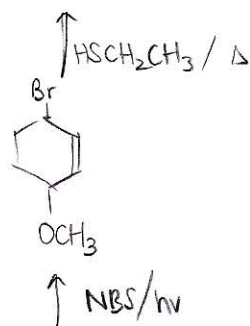
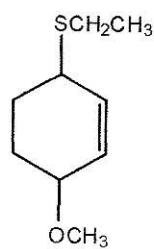
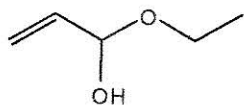


26.

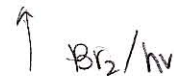
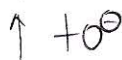
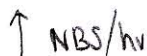
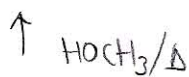
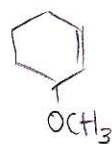




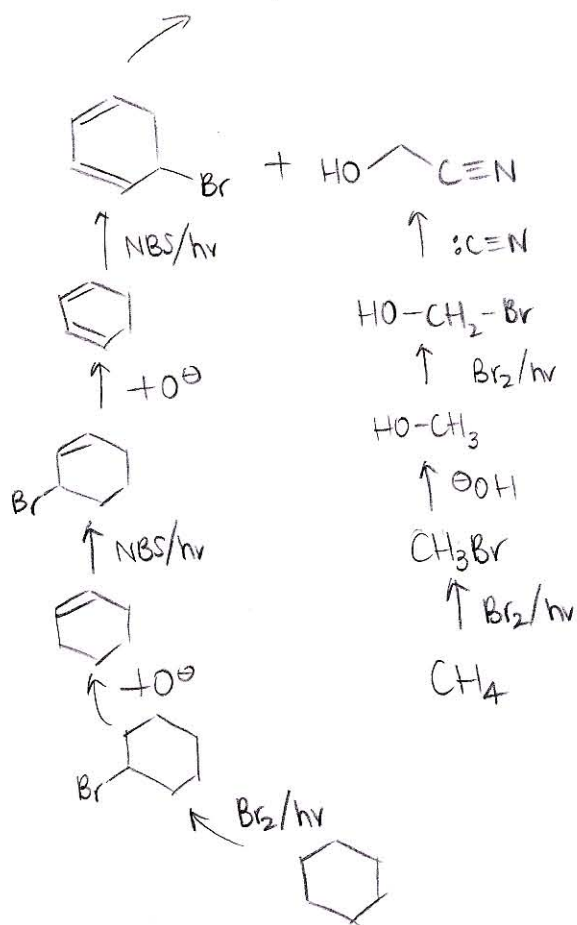
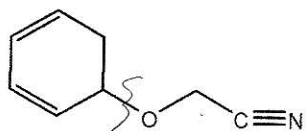
40.



★ similar to HOCH<sub>2</sub>CH<sub>3</sub> /  $\Delta$

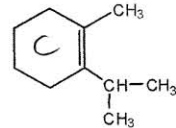
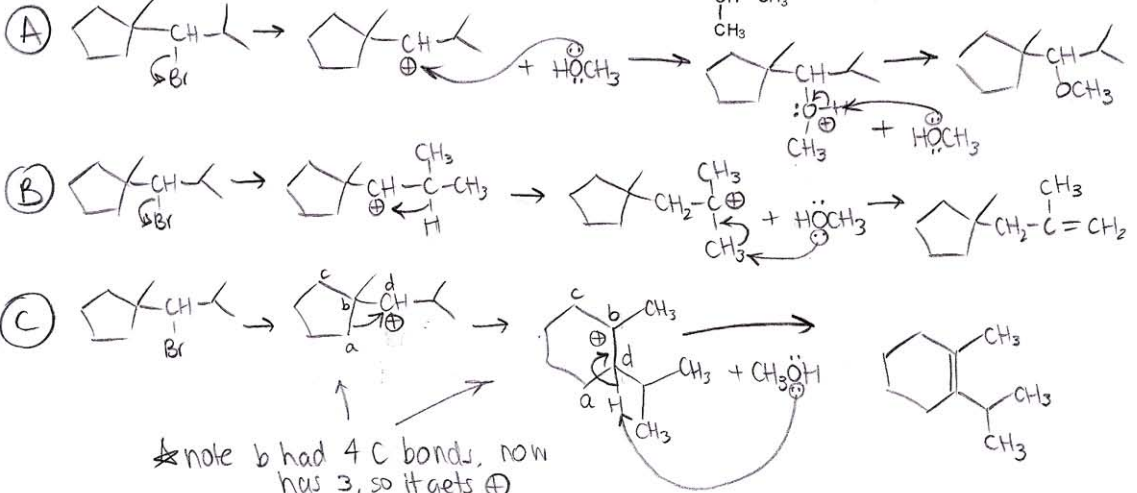
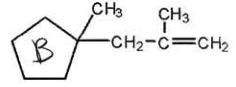
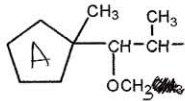
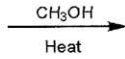
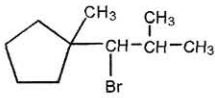


41.



★ fix this

27.



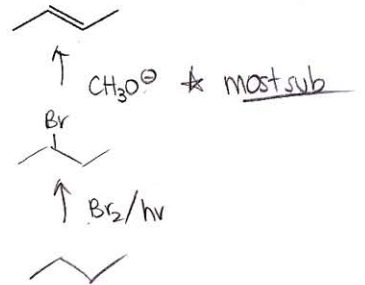
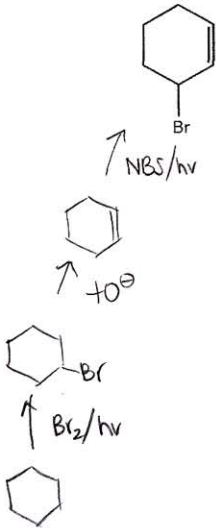
★ note b had 4 C bonds, now has 3, so it gets  $\oplus$

the bond broke between b+a, and formed between a+d.

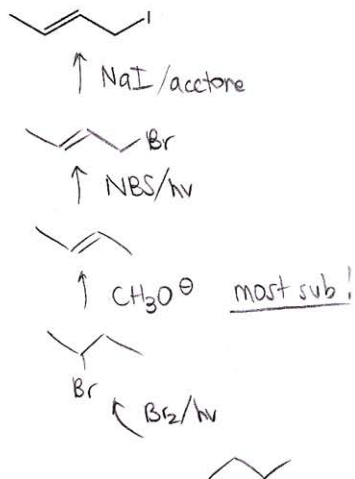
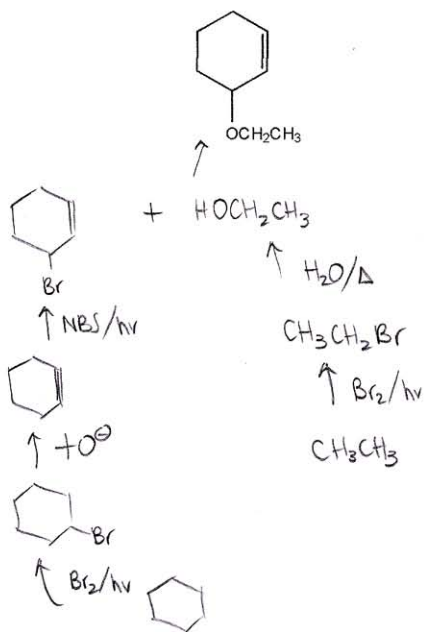
**Synthesis**

Synthesize the compounds below from any alkanes, cycloalkanes, and any inorganic reagents.

28.



29.



30.

