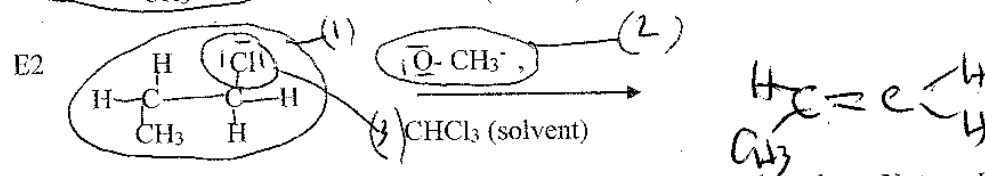
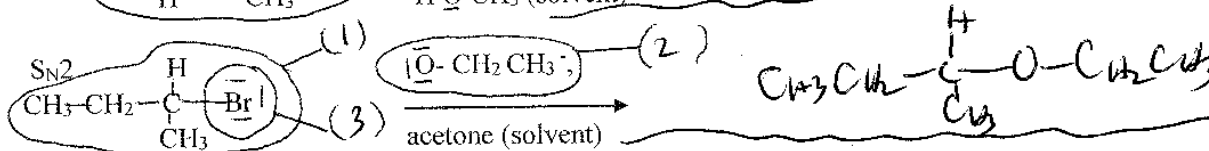
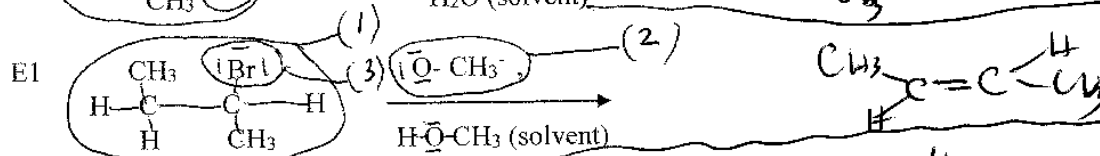
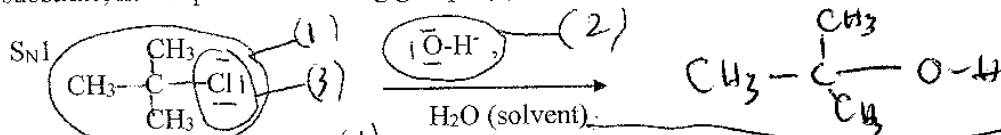
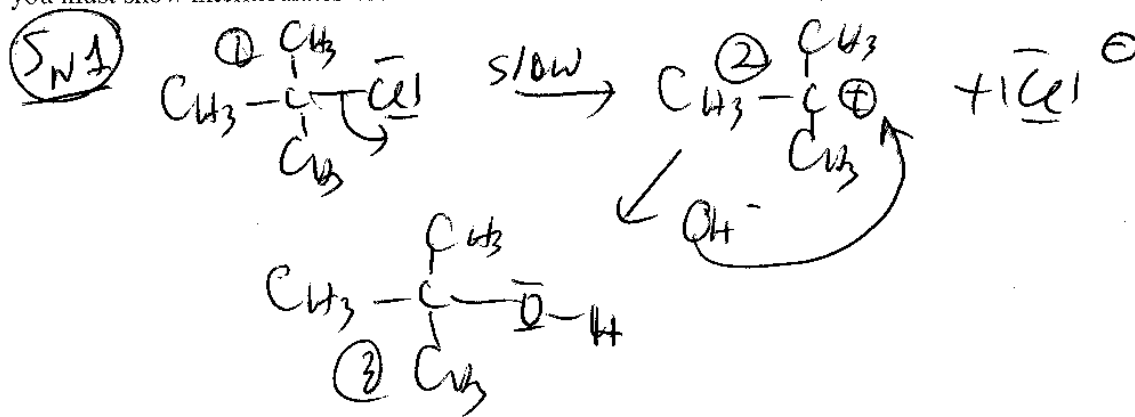


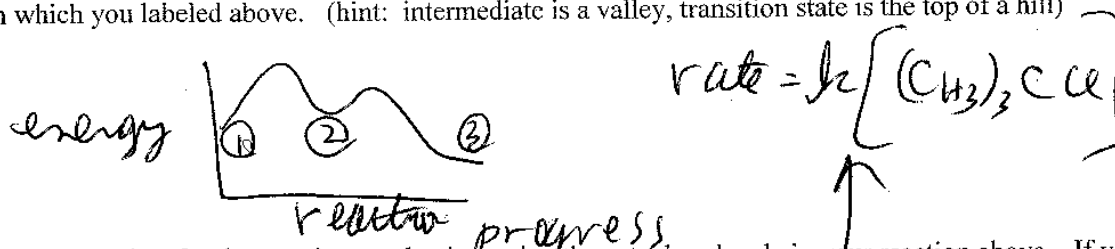
A. Complete the overall reaction. Label the circled parts of the molecule with one of the numbers for substrate, nucleophile and leaving group. (1) substrate (2) nucleophile (3) leaving group



B. Show the entire reaction mechanism including reactant and product. **Note:** For the mechanisms with 2 in the name (S_N2 , $E2$), you must show transition state. for the mechanisms with the 1 in the name (S_N1 , $E1$), you must show intermediates and do not need to show transition states.)

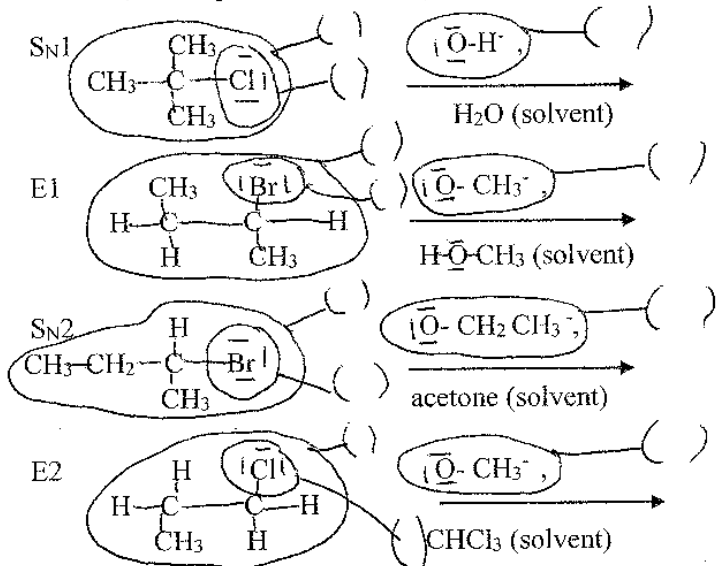


C. Draw an energy diagram which matches the above mechanism. Above in part B your mechanism, label the reaction mechanism (a,b,c,etc). Label your energy diagram with (a), (b), (c), etc that matches parts of mechanism which you labeled above. (hint: intermediate is a valley, transition state is the top of a hill)

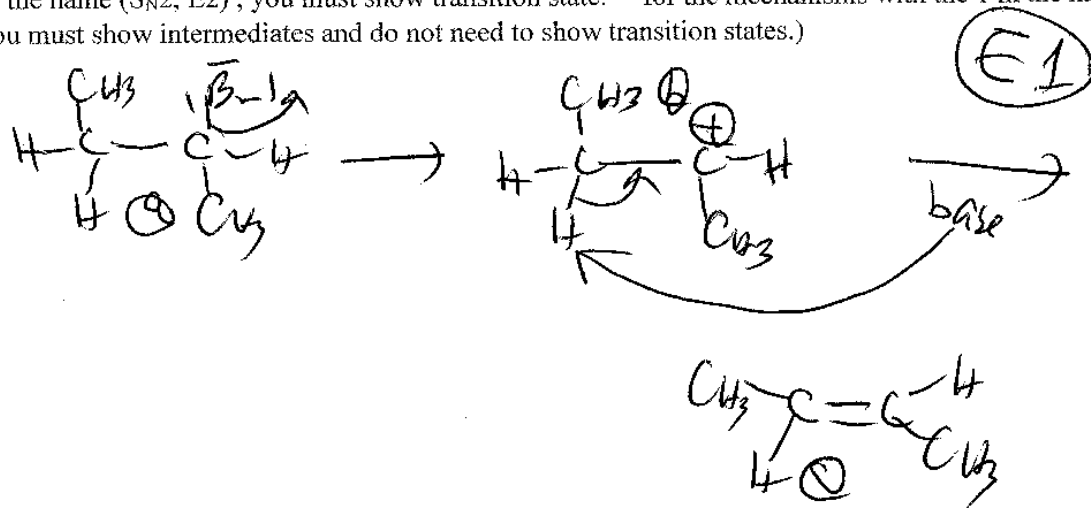


D. Write the rate law for the reaction mechanism using the actual molecule in your reaction above. If you write the rate law using the words substrate or nucleophile, I will count off.

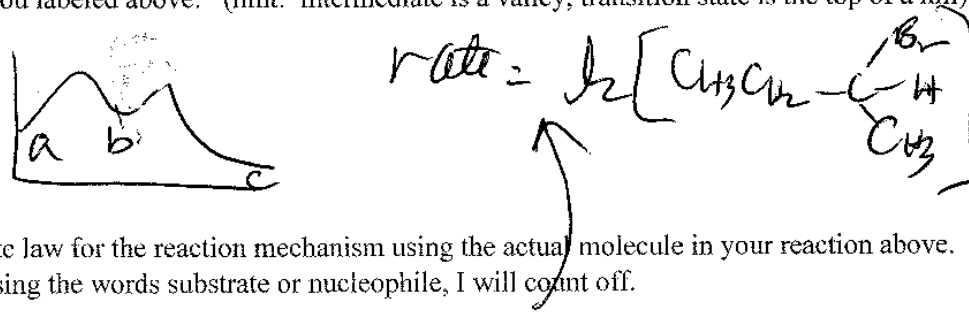
A. Complete the overall reaction. Label the circled parts of the molecule with one of the numbers for substrate, nucleophile and leaving group. (1) substrate (2) nucleophile (3) leaving group



B. Show the entire reaction mechanism including reactant and product. **Note:** For the mechanisms with 2 in the name (SN2 , E2), you must show transition state. for the mechanisms with the 1 in the name (SN1 , E1), you must show intermediates and do not need to show transition states.)

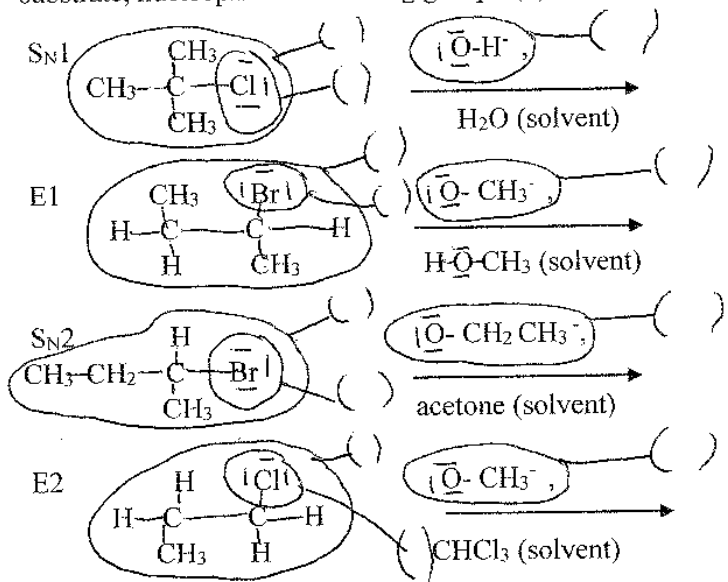


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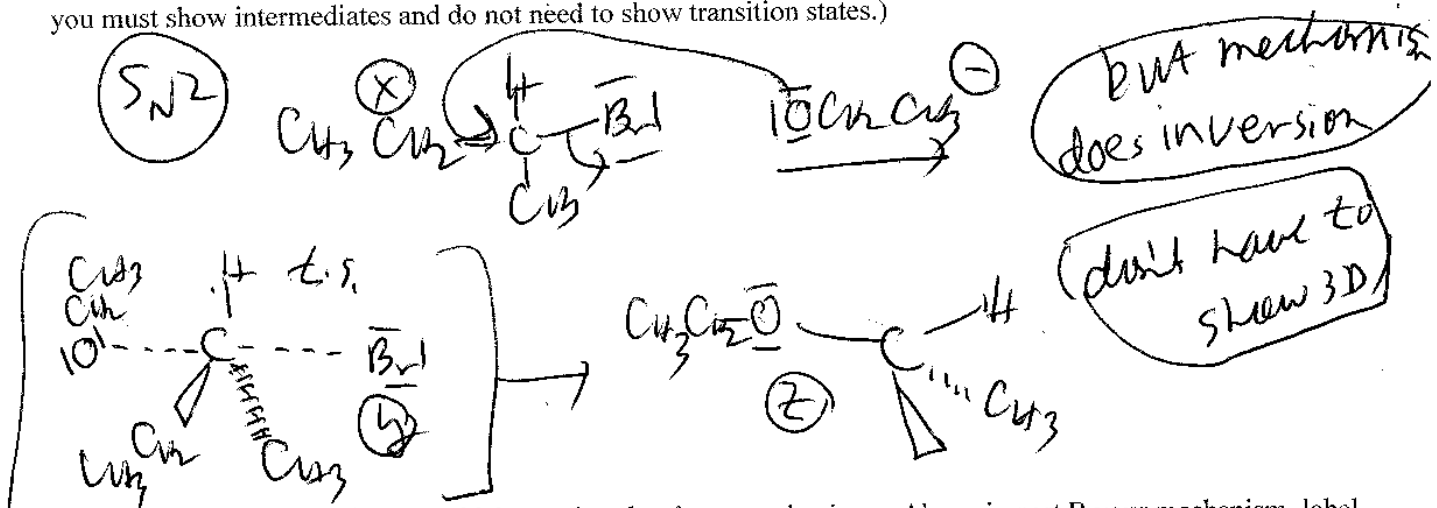


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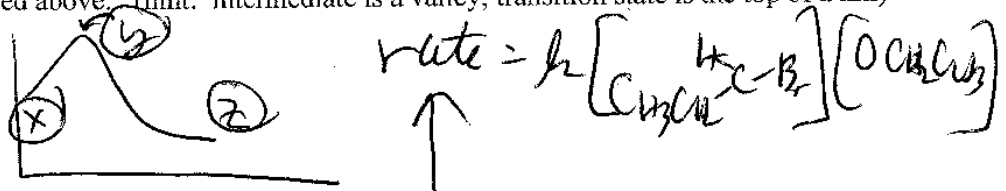
A. Complete the overall reaction. Label the circled parts of the molecule with one of the numbers for substrate, nucleophile and leaving group. (1) substrate (2) nucleophile (3) leaving group



B. Show the entire reaction mechanism including reactant and product. **Note:** For the mechanisms with 2 in the name (SN2 , E2), you must show transition state. for the mechanisms with the 1 in the name (SN1 , E1), you must show intermediates and do not need to show transition states.)

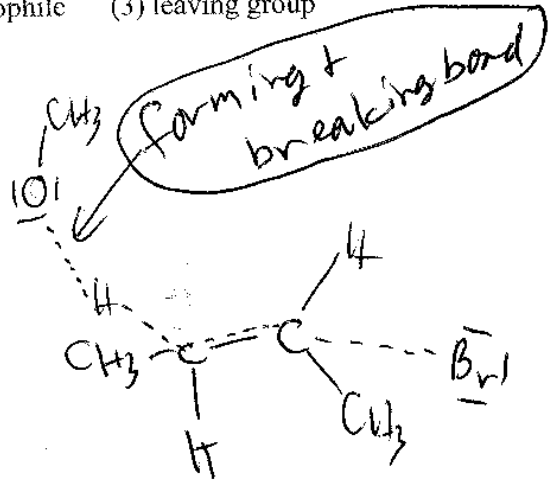
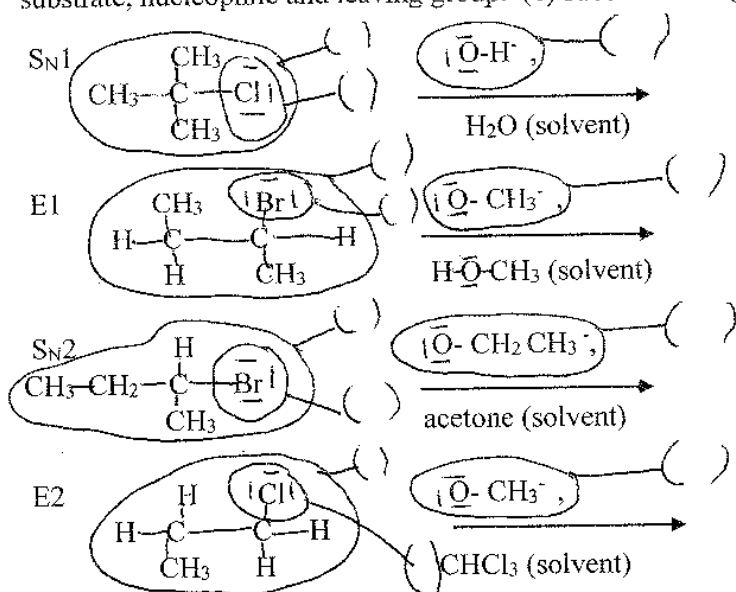


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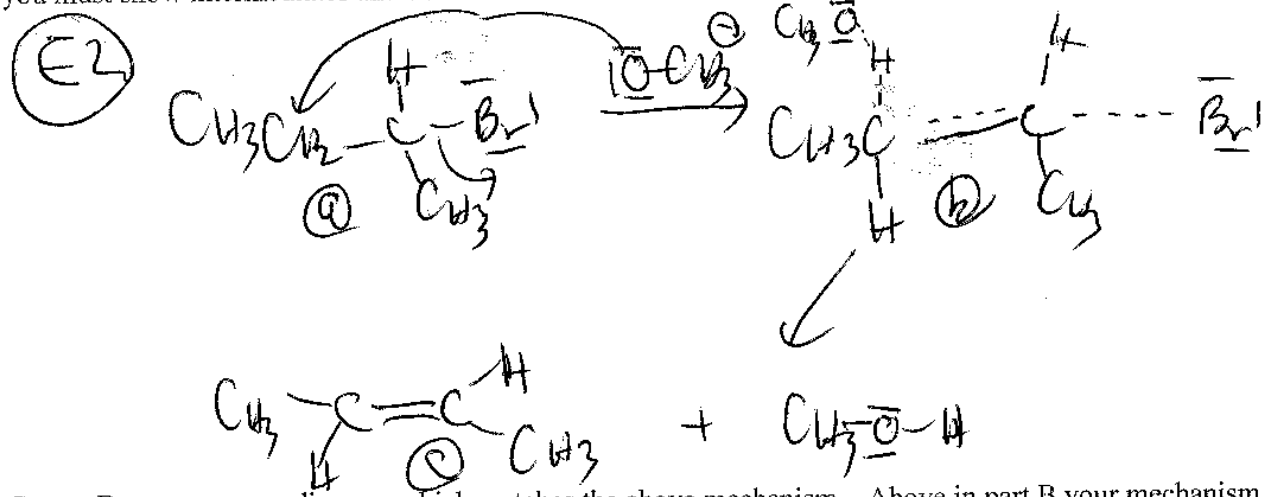


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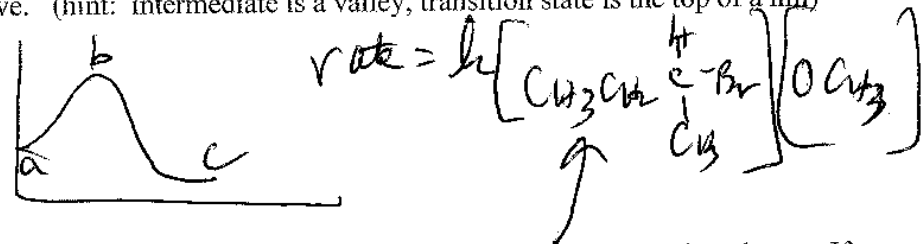
A. Complete the overall reaction. Label the circled parts of the molecule with one of the numbers for substrate, nucleophile and leaving group. (1) substrate (2) nucleophile (3) leaving group



B. Show the entire reaction mechanism including reactant and product. **Note:** For the mechanisms with 2 in the name (SN2, E2), you must show transition state. for the mechanisms with the 1 in the name (SN1, E1), you must show intermediates and do not need to show transition states.)



C. Draw an energy diagram which matches the above mechanism. Above in part B your mechanism, label the reaction mechanism (a,b,c,etc). Label your energy diagram with (a), (b), (c), etc that matches parts of mechanism which you labeled above. (hint: intermediate is a valley, transition state is the top of a hill)



D. Write the rate law for the reaction mechanism using the actual molecule in your reaction above. If you write the rate law using the words substrate or nucleophile, I will count off.