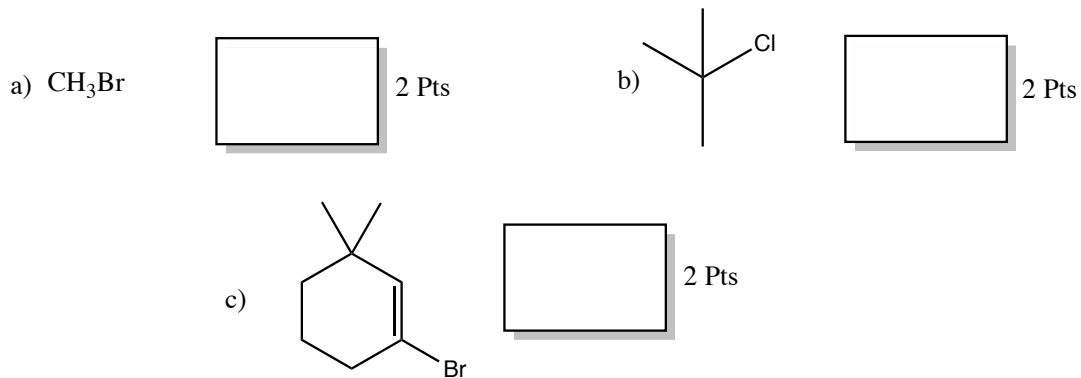
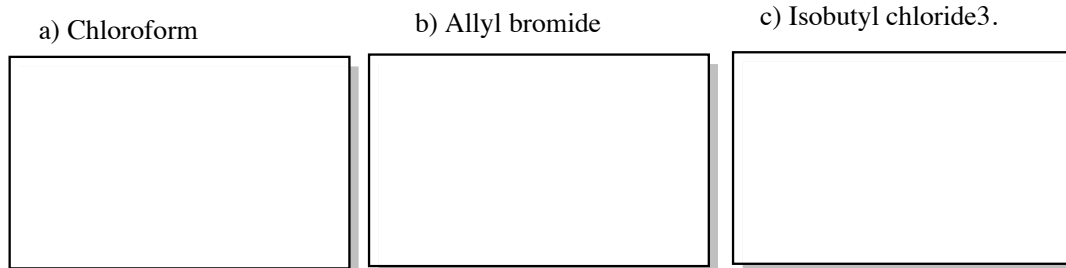


Summer 2015, CEM143, Quiz 4

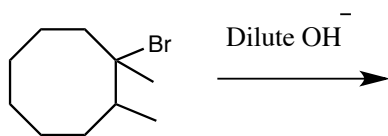
1. (6 Points) Label the following alkyl halides based on their reactivity toward S_N1/S_N2 as S_N1 , S_N2 , or neither.



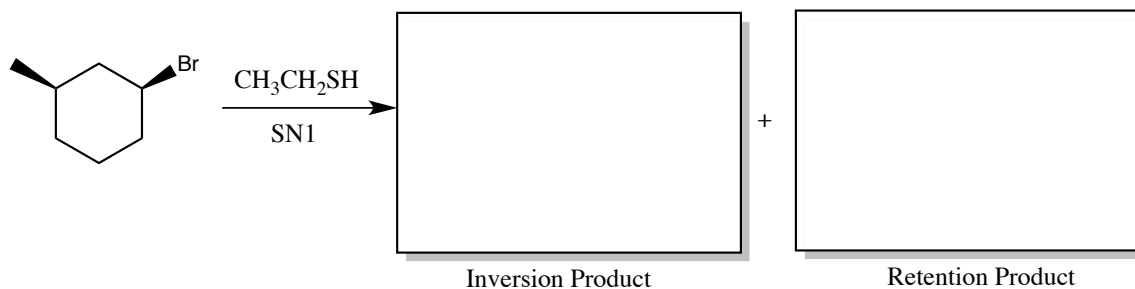
2. (6 Points, 2 Pts. each) Give the structures for the following compounds.



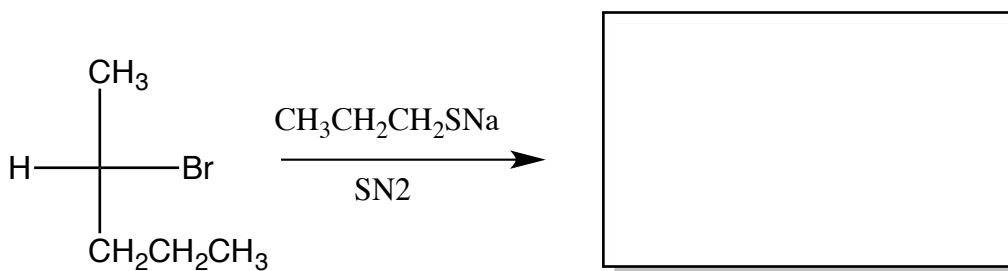
3. (4 Points) Provide all elimination products for the following elimination reaction of first order, and encircle the major product.



4. (4 Points, 2 points each box) Complete the following Chemical transformations.



5. (5 Points) For the following SN_2 reaction:



a) (2 Points) Provide the product in the above box.

b) (1 Point) Draw the "pentavalent structure" at the transition state.

c) Provide the energy diagram for the above SN_2 reaction, indicating the position of reactants, products, energy of activation, and heat of reaction assuming an **endothermic process**.