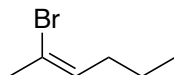
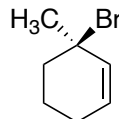


**Problem Set 9**  
**Chapter 8, Haloalkanes, Halogenation and Radical Reactions**

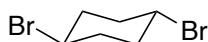
1. Give the IUPAC names for the following compounds stereochemistry where necessary.



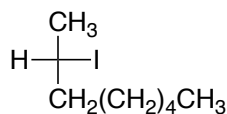
(Z)-2-bromohex-2-ene



(R)-3-bromo-3-methylcyclohex-1-ene

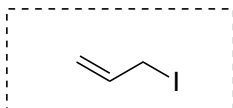


(1R,4R)-1,4-dibromocyclohexane

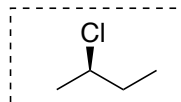


(S)-2-iodooctane

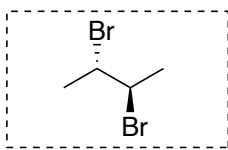
2. Draw structural formulas for the following compounds.



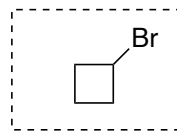
3-iodo-1-propene



(R)-2-chlorobutane

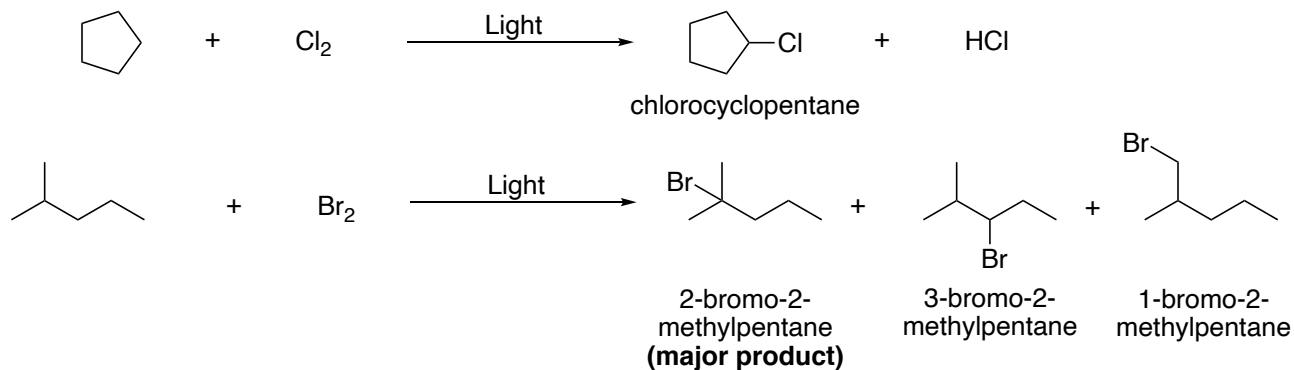


meso-2,3-dibromobutane

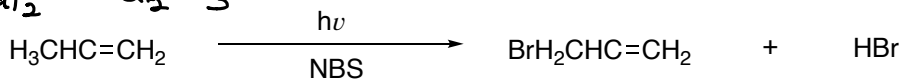
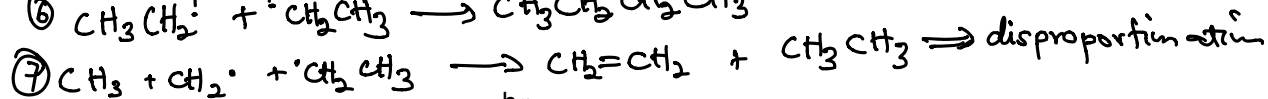
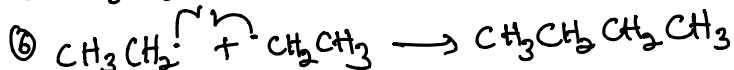
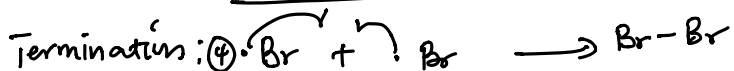
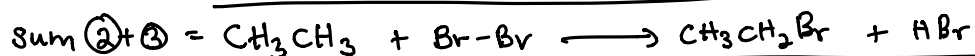
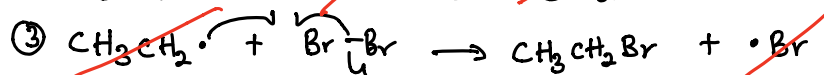
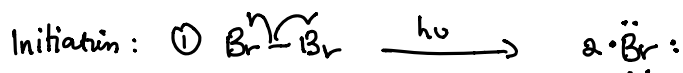
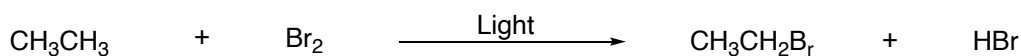


Bromocyclobutane

3. Name and draw the structural formulas for all possible monohalogenation products that might be formed in the following reactions.



4. Propose the radical reaction mechanism for the reaction below; show the initiation, propagation and termination steps.



Refer to Notes.