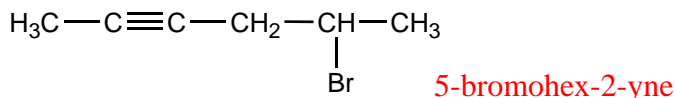


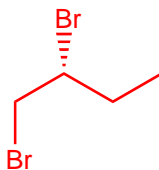
I. Answer each of the following. 3 pts each, 15 pts total.

1. Give the IUPAC name



2. Draw complete structure (including stereochemistry using dash and wedge bonds). Circle final answer)

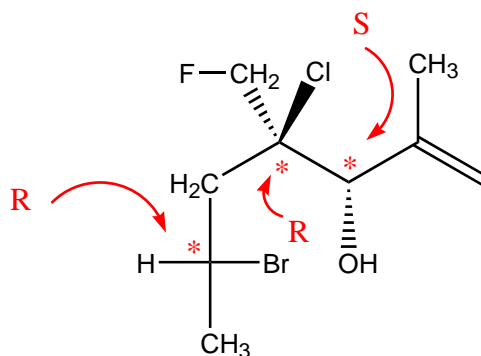
R-1,2-dibromobutane



3. Write the name of the enantiomer of the compound in problem #2 above.

S-1,2-dibromobutane

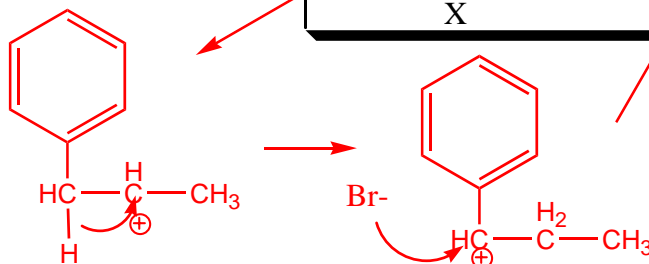
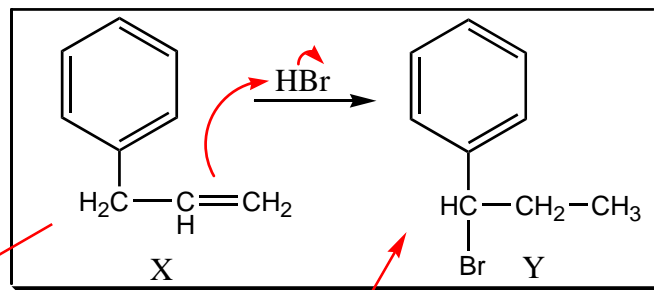
4. Place an asterisk (\*) next to each chiral center in the structure shown at the right.



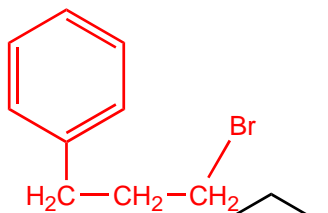
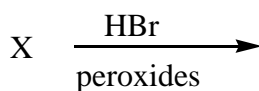
5. Select ONE of the chiral centers you marked in #4, draw an arrow to it, and write the configuration as R or S at the end of that arrow.

II. Answer each of the following concerning the reaction shown for conversion of X to Y..

1. Use curved arrow formalism to show a plausible step-by-step mechanism that accounts for the formation of Y. Show all likely intermediates. (7 pts)



2. Draw the expected product if the reaction above was carried out using HBr with peroxides present. (4 pts)



3. Draw the expected product if X is changed to a cyclohexyl group instead of a phenyl group when it reacts with HBr without peroxides. (4 pts)

