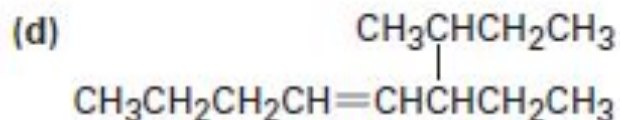
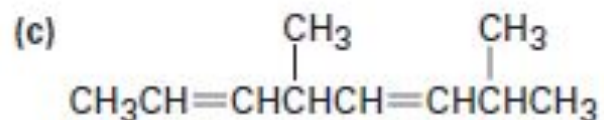
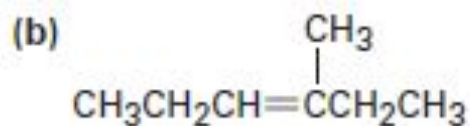
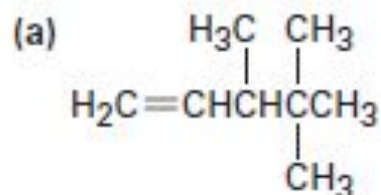
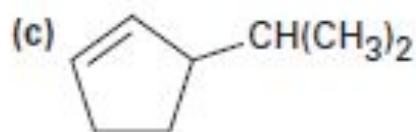
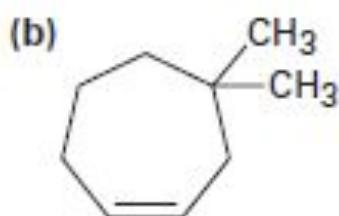
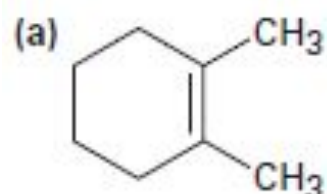


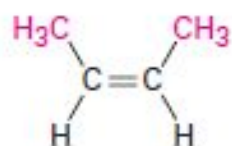
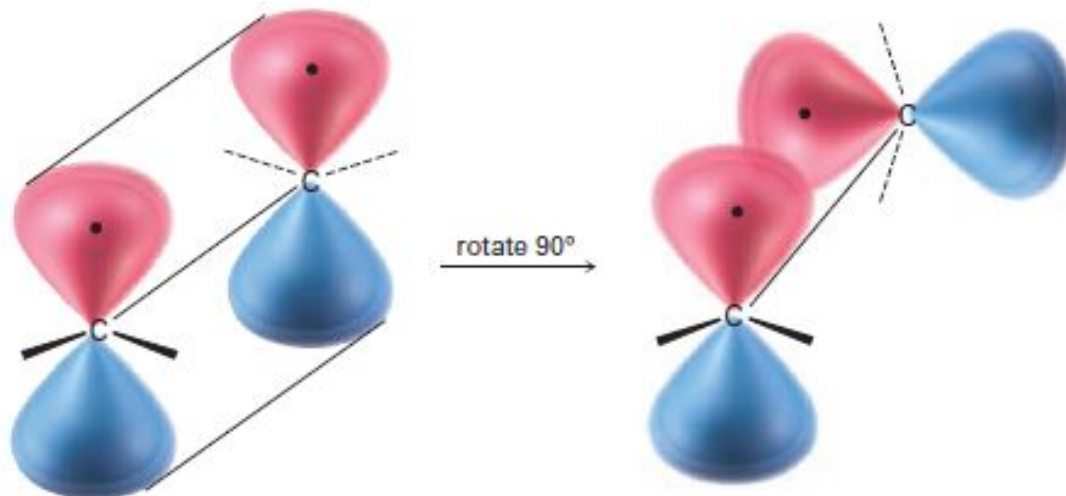
Алкены

Give IUPAC names for the following compounds:

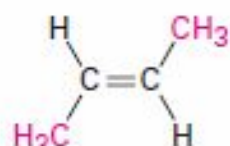


Name the following cycloalkenes:

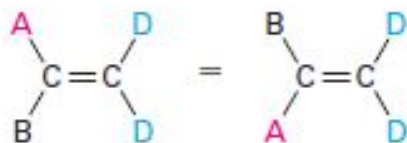




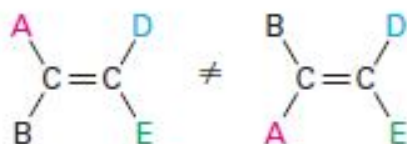
cis-2-Butene



trans-2-Butene

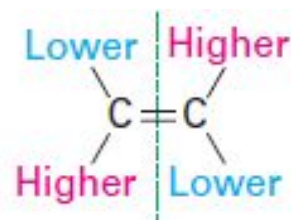
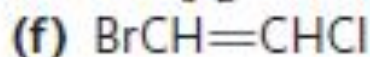
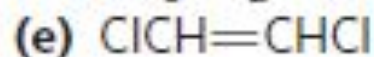
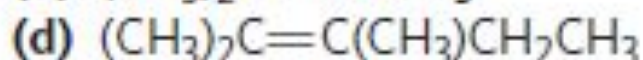
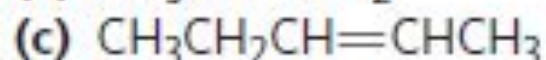
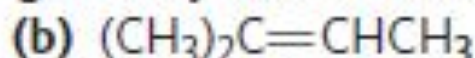
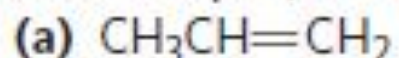


These two compounds are identical;
they are not cis-trans isomers.

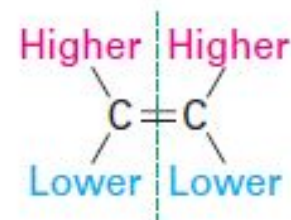


These two compounds are not identical;
they are cis-trans isomers.

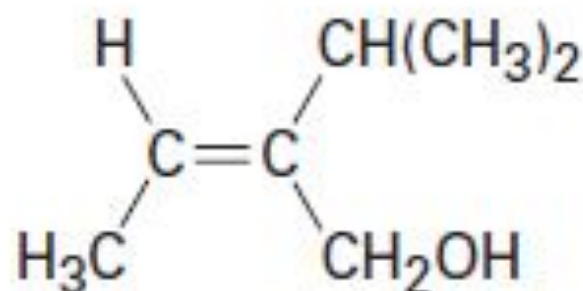
Which of the following compounds can exist as pairs of cis-trans isomers? Draw each cis-trans pair, and indicate the geometry of each isomer.



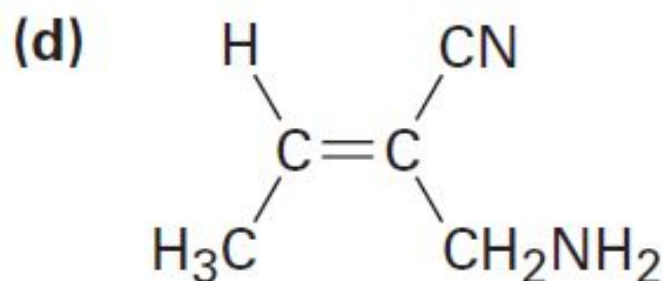
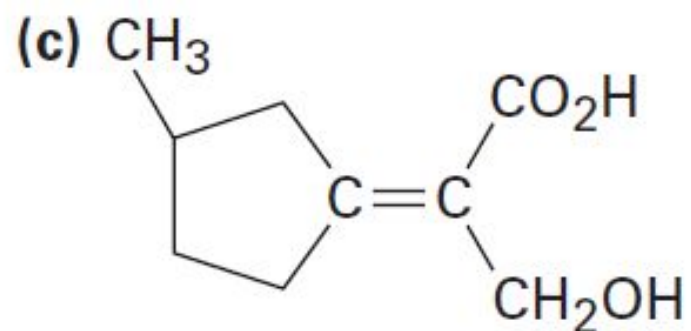
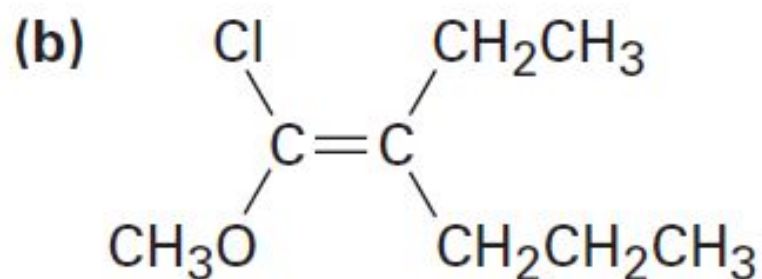
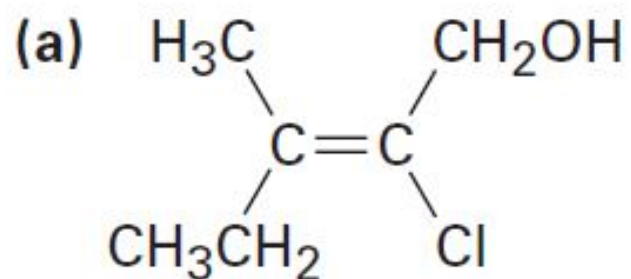
E double bond
(Higher-ranked groups
are on **opposite** sides.)

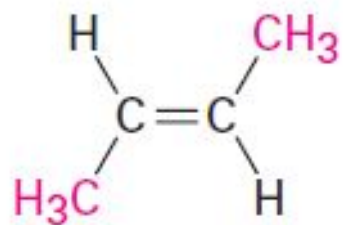


Z double bond
(Higher-ranked groups
are on the **same** side.)

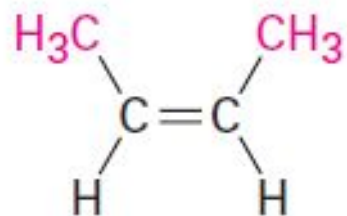
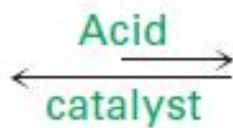


Assign *E* or *Z* configuration to the following alkenes:

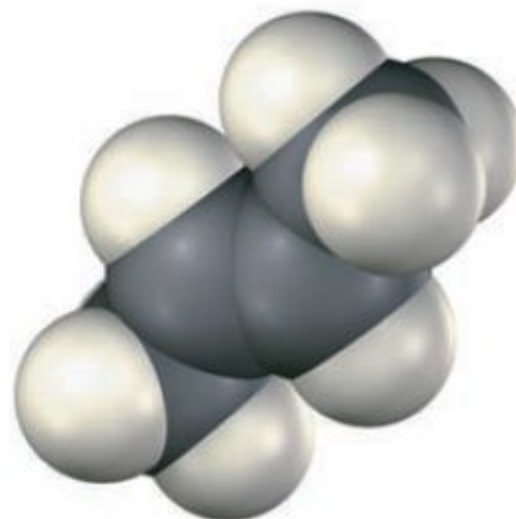
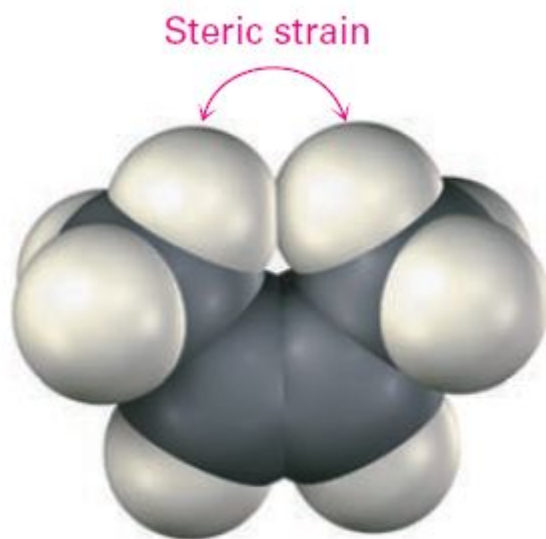


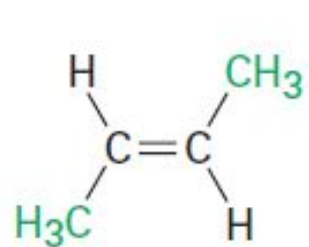


Trans (76%)

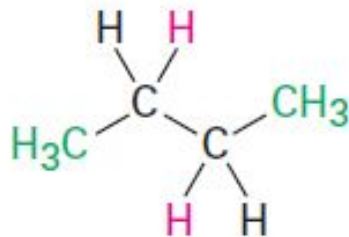
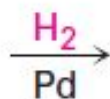


Cis (24%)

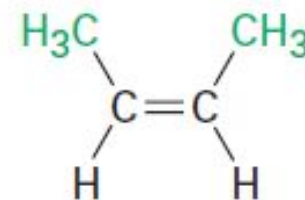
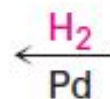




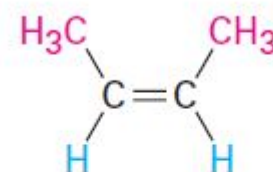
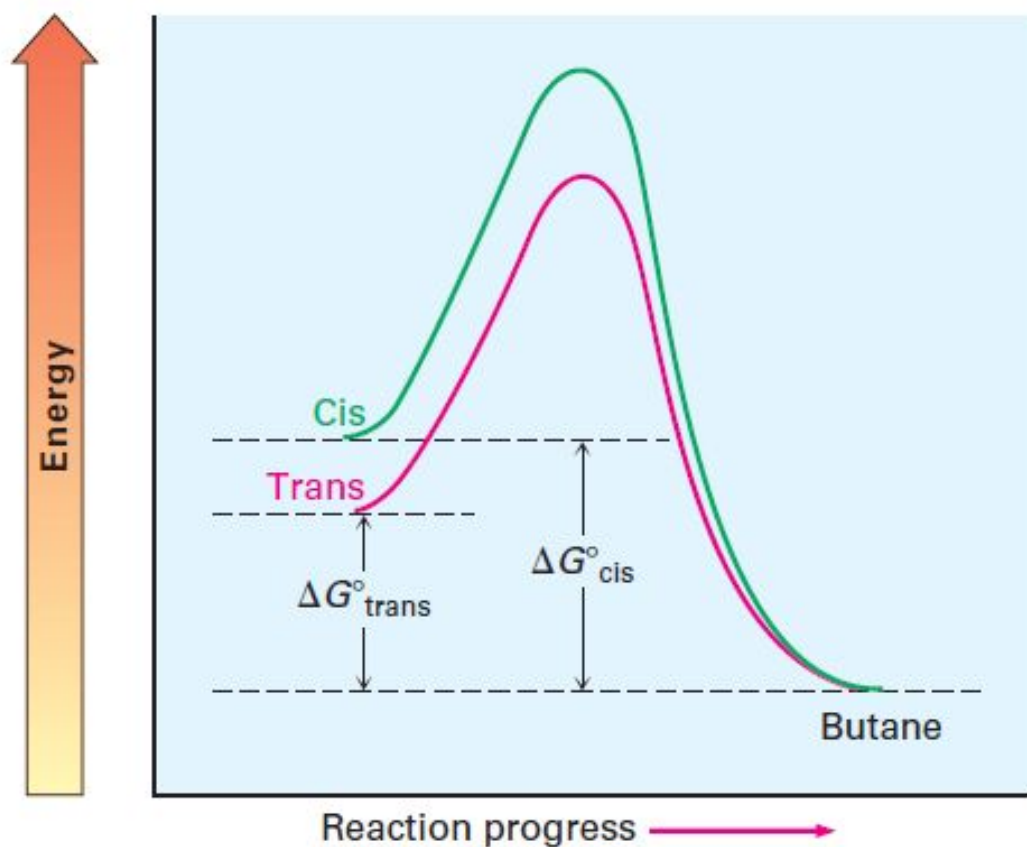
trans-2-Butene



Butane

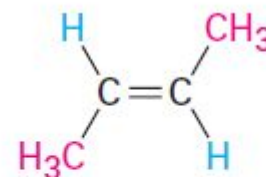


cis-2-Butene



Cis isomer

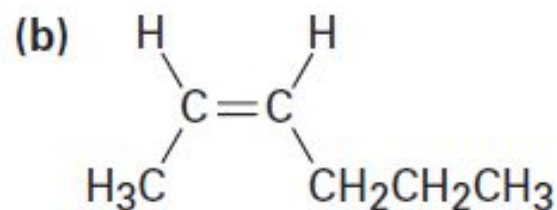
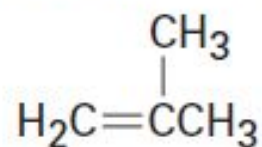
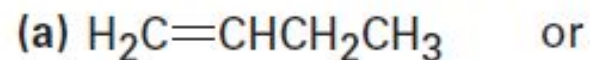
$$\Delta H^\circ_{\text{hydrog}} = -120 \text{ kJ/mol}$$



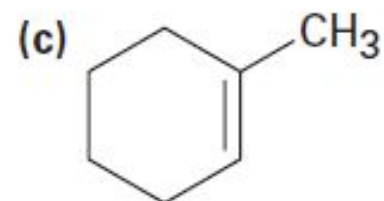
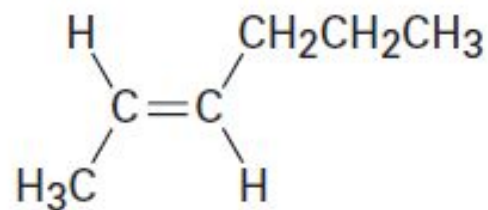
Trans isomer

$$\Delta H^\circ_{\text{hydrog}} = -116 \text{ kJ/mol}$$

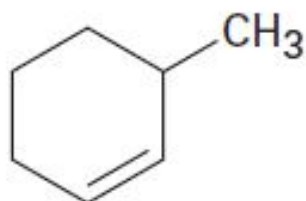
Name the following alkenes, and tell which compound in each pair is more stable:

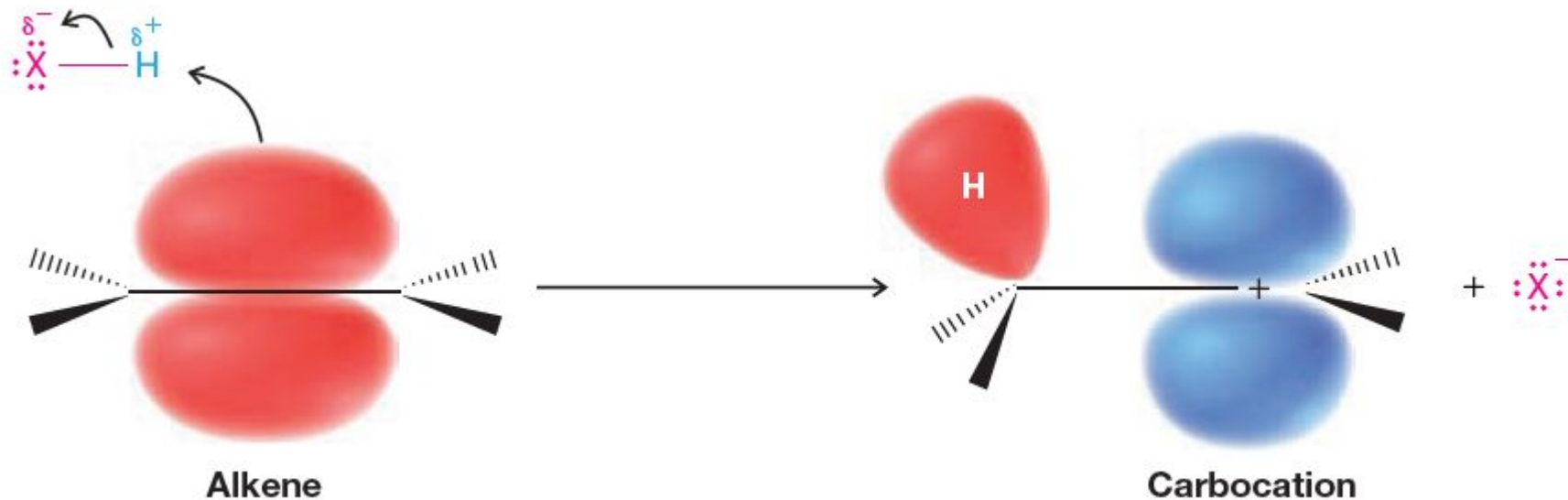
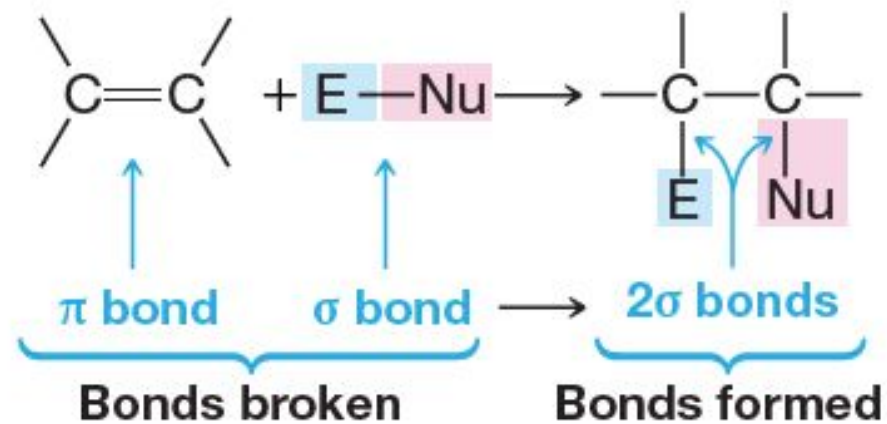


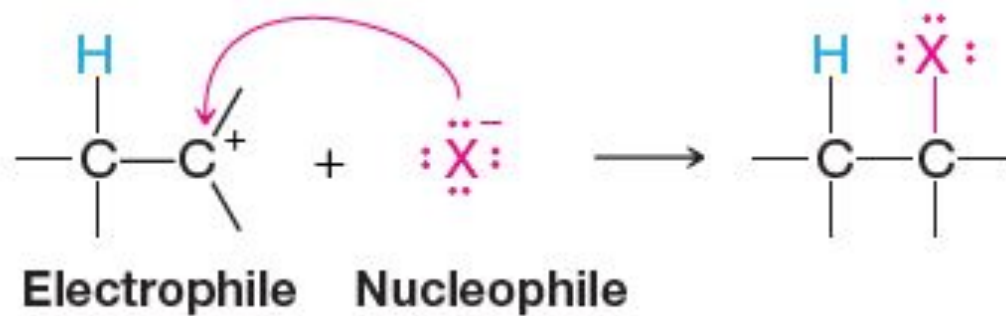
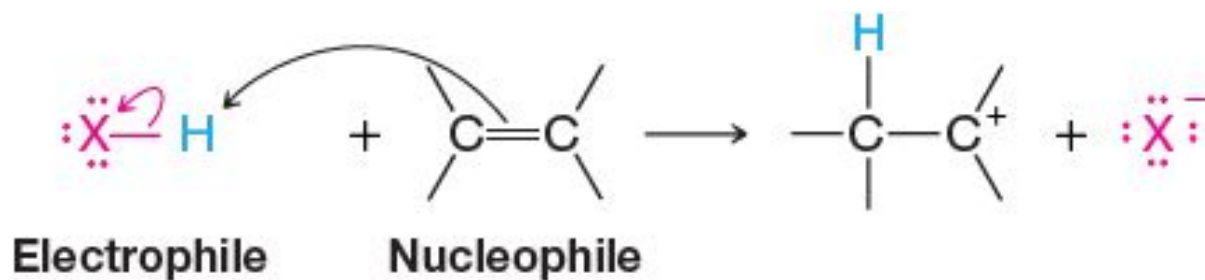
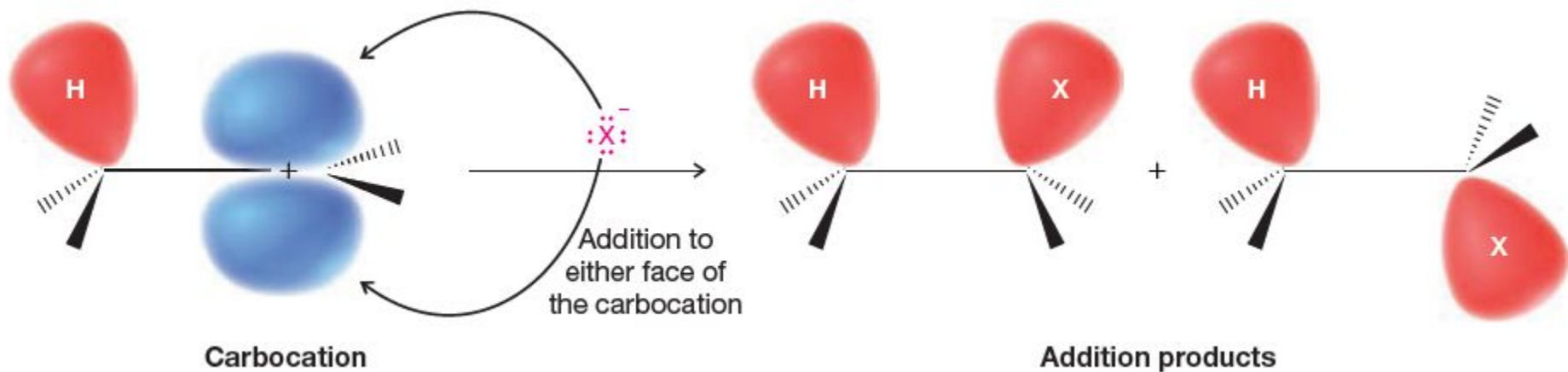
or

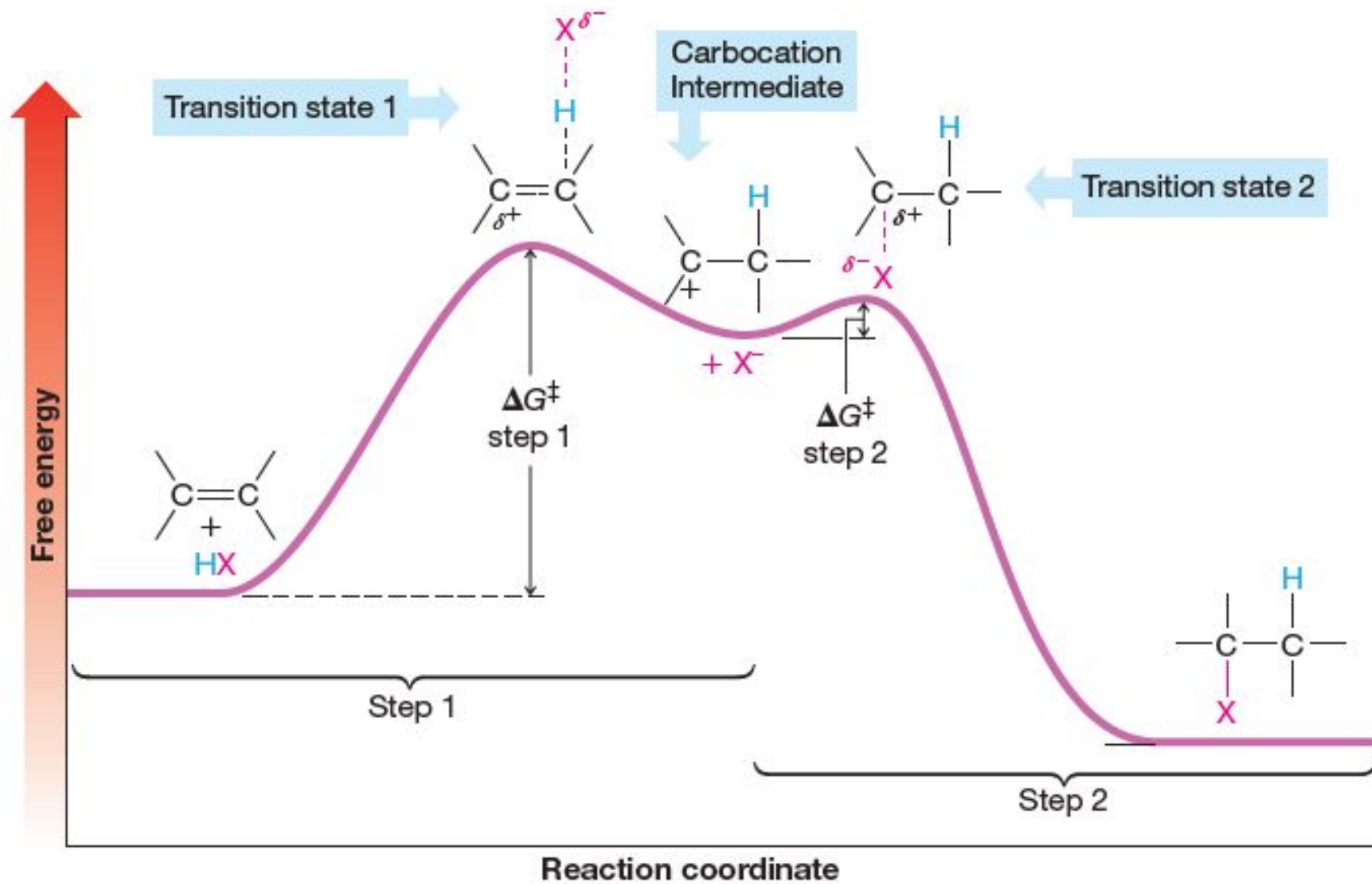


or

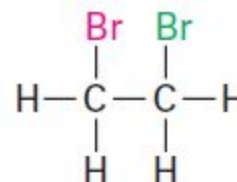
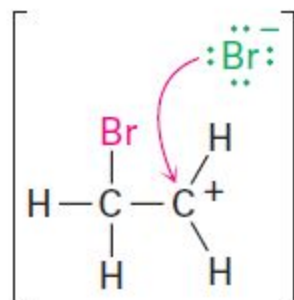
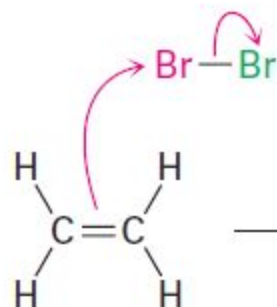








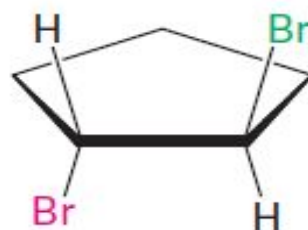
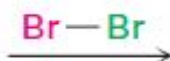
Possible
mechanism?



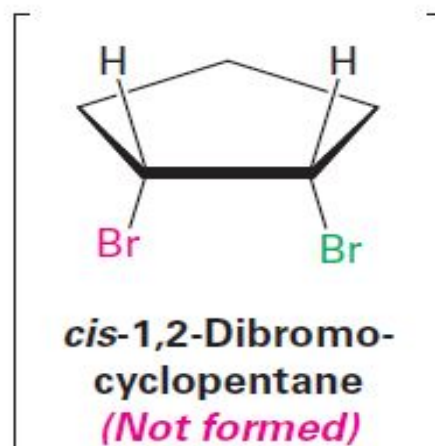
Possible
mechanism?



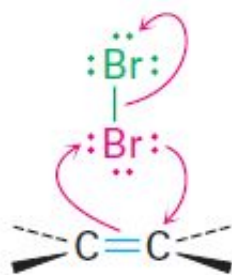
Cyclopentene



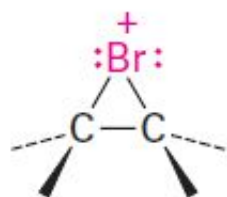
trans-1,2-Dibromo-
cyclopentane
(sole product)



cis-1,2-Dibromo-
cyclopentane
(Not formed)

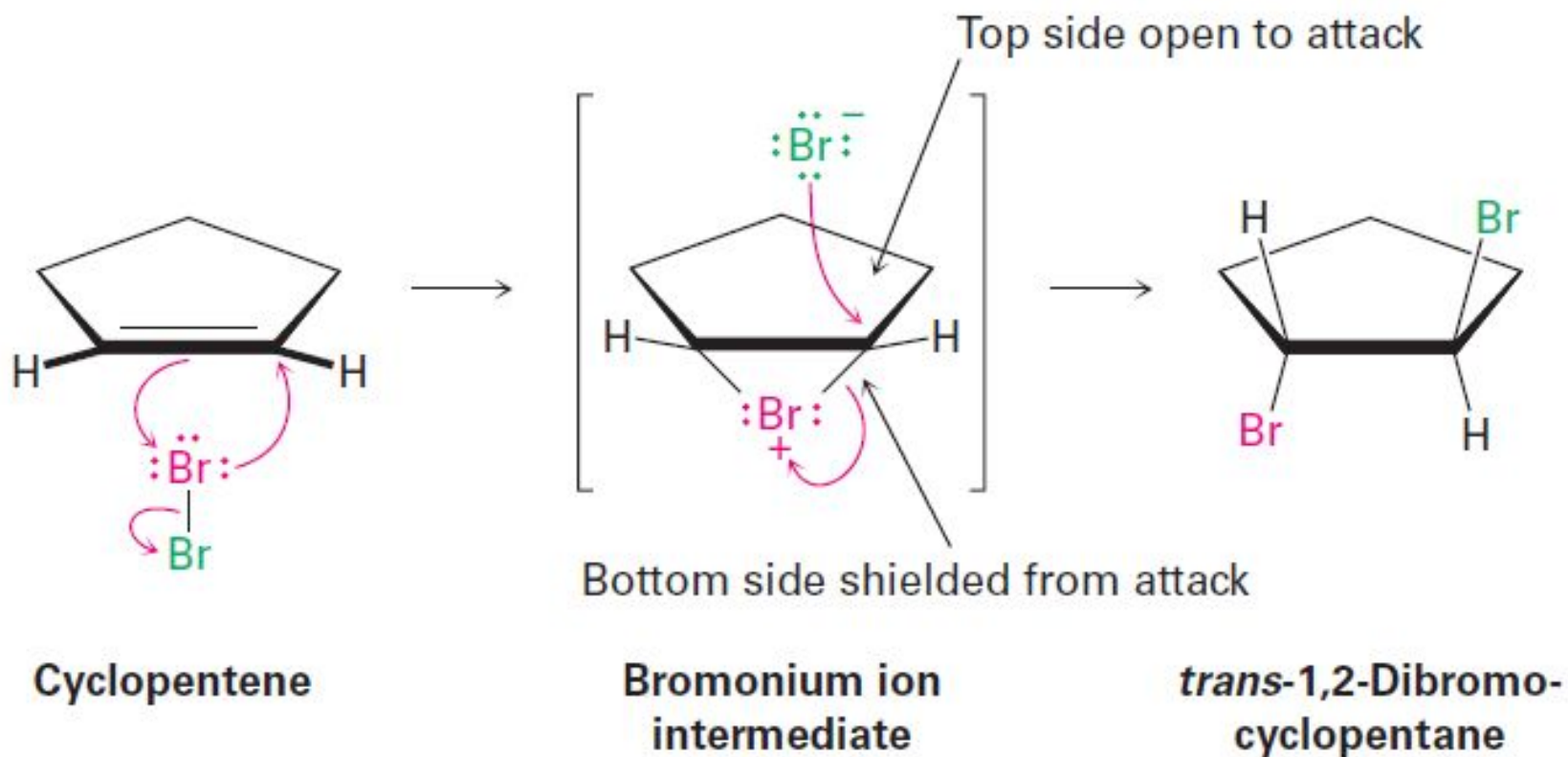


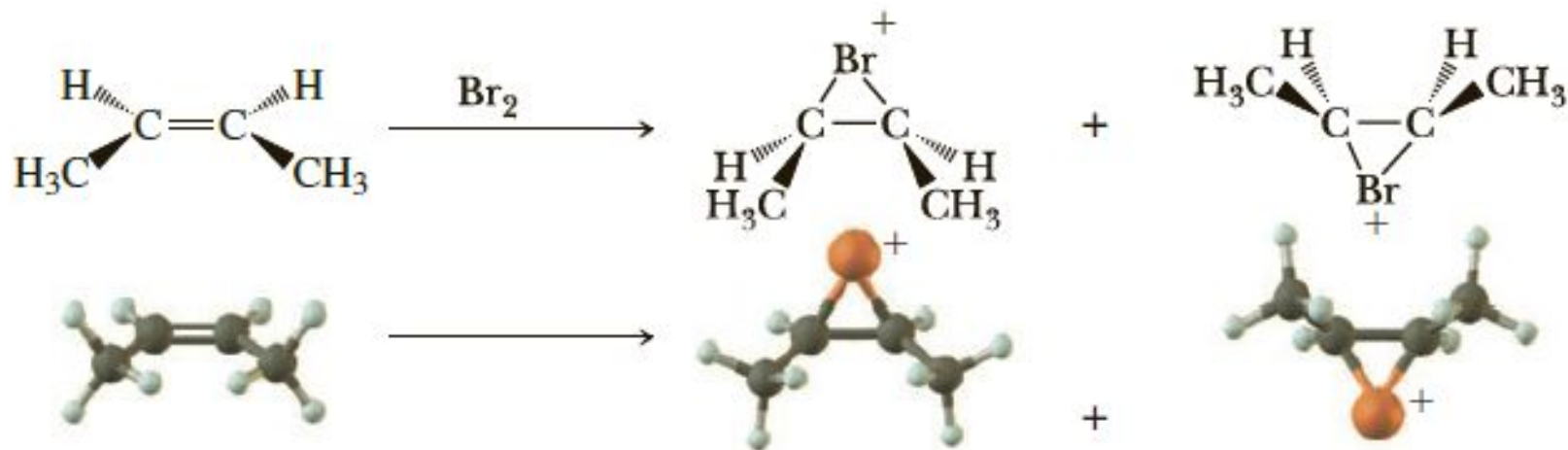
An alkene



A bromonium ion

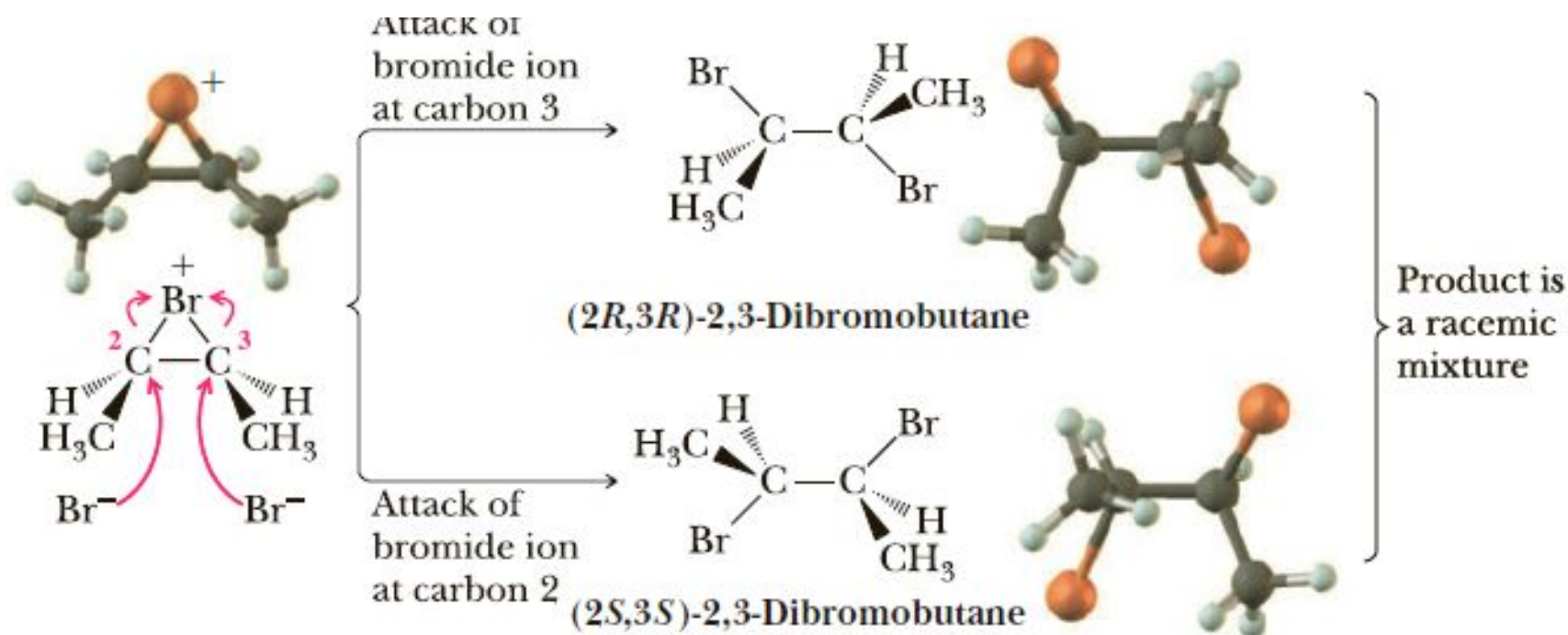


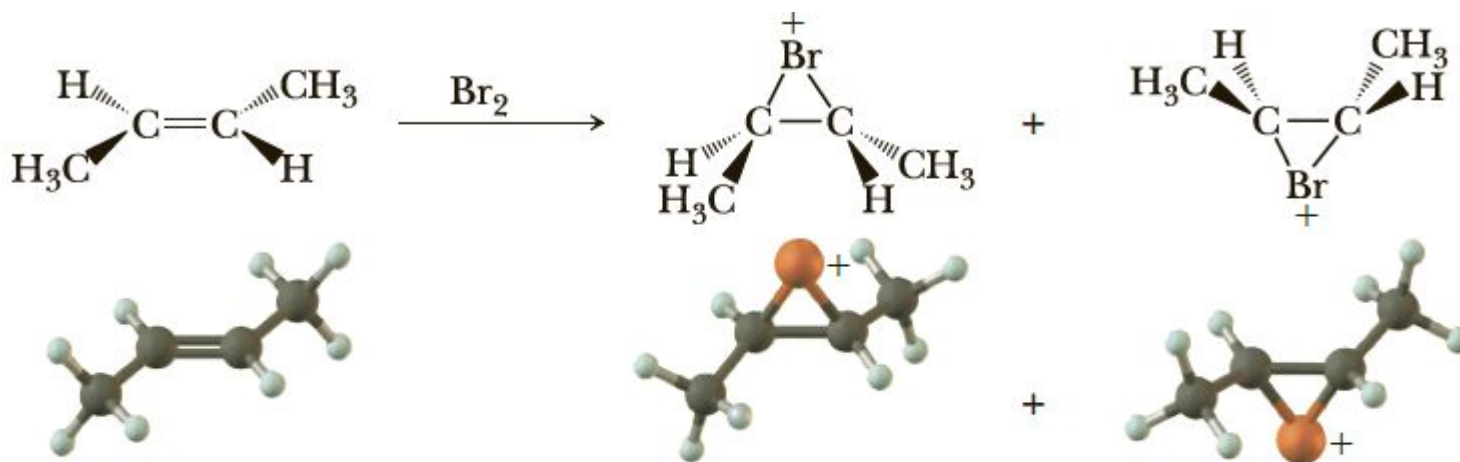




cis-2-Butene
(achiral)

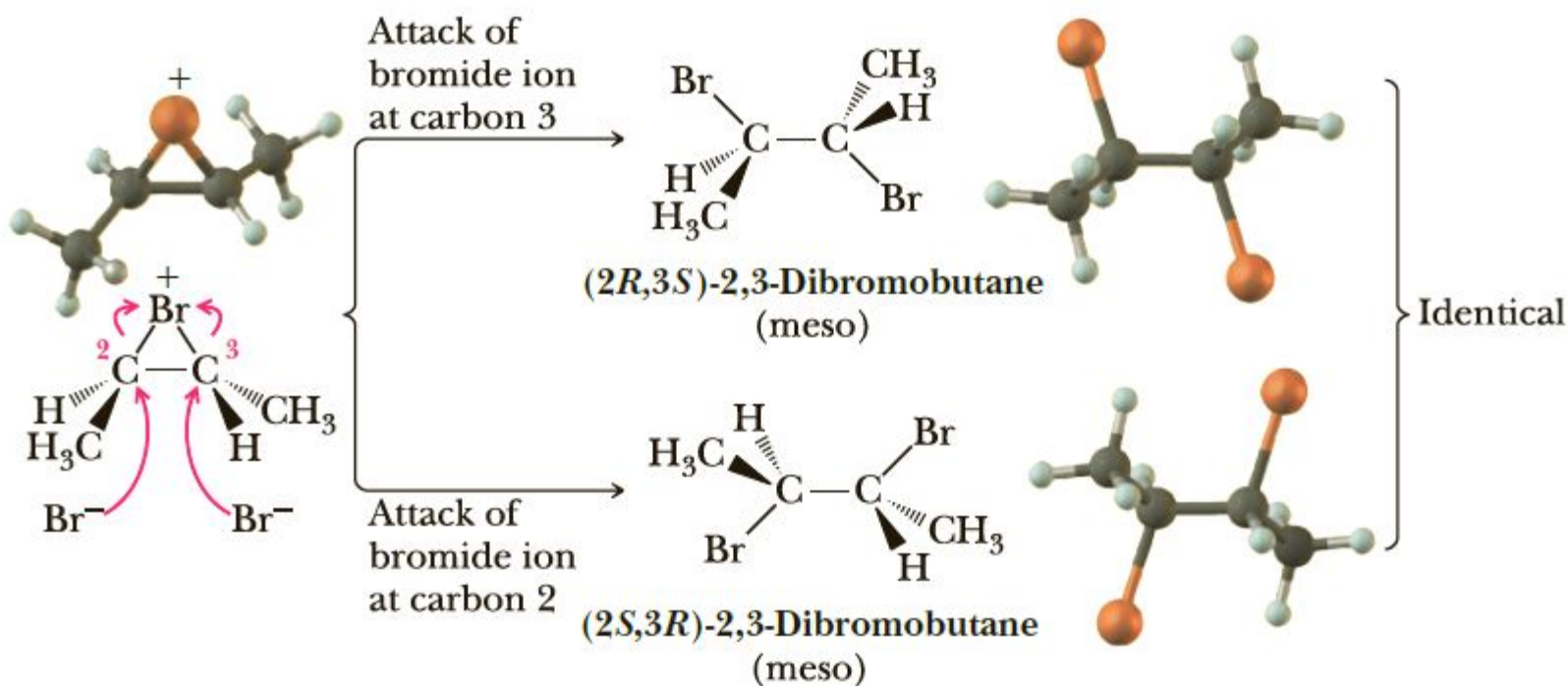
(meso bridged bromonium ion intermediate)

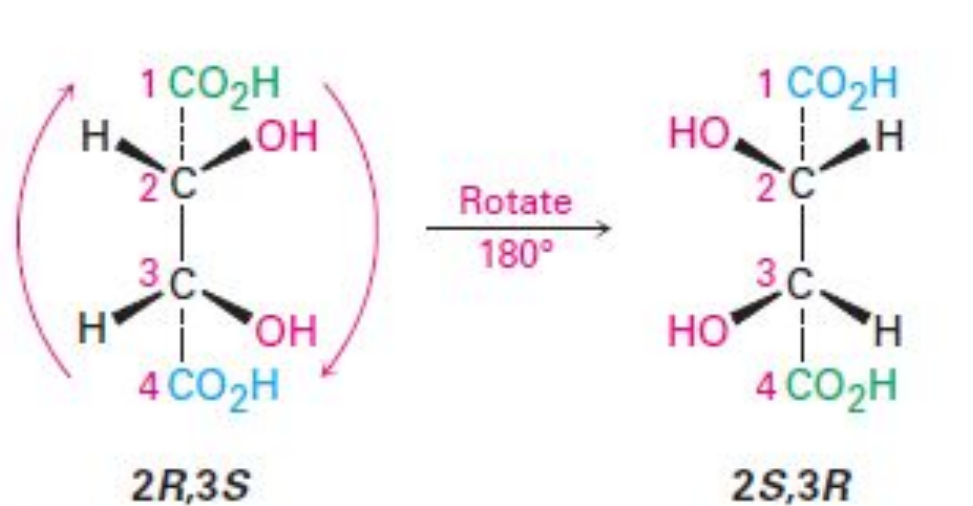
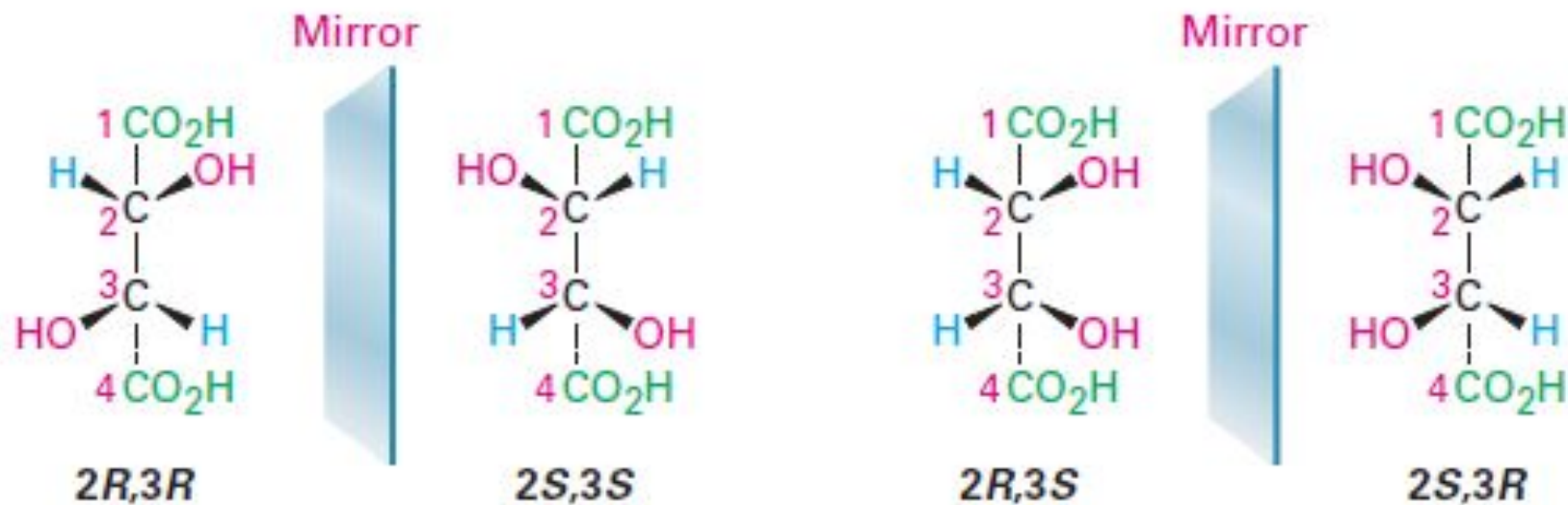




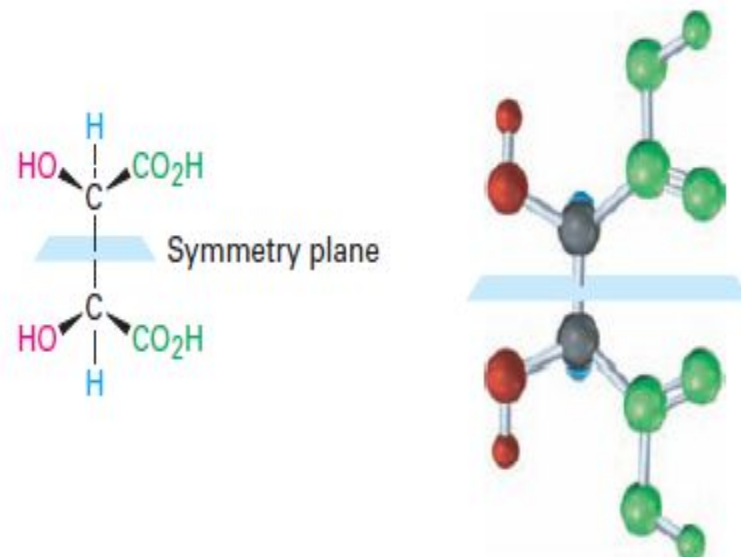
trans-2-Butene
(achiral)

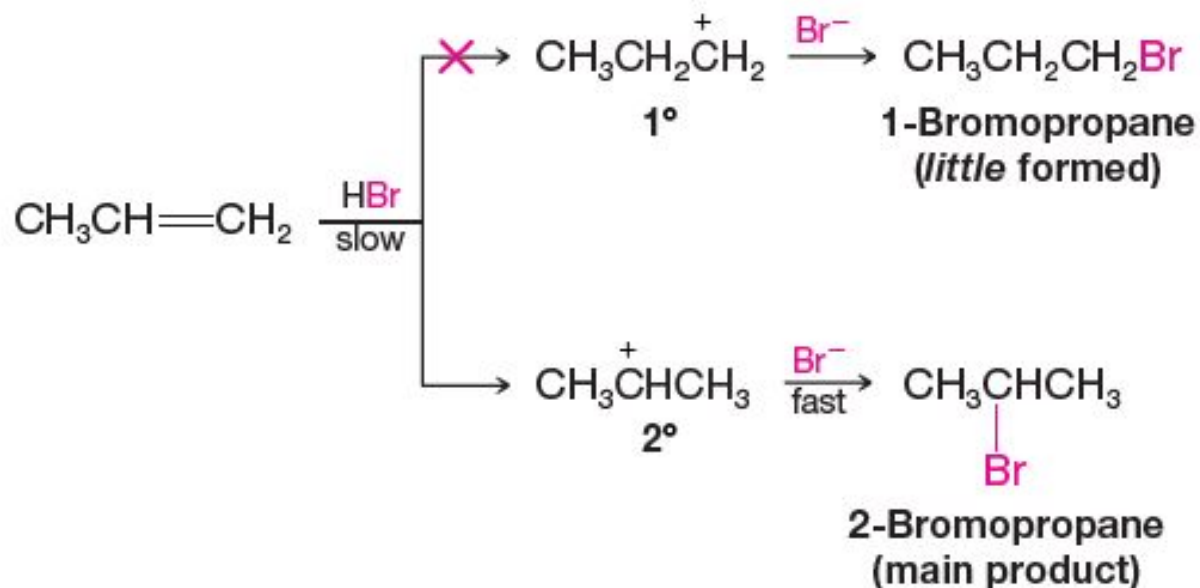
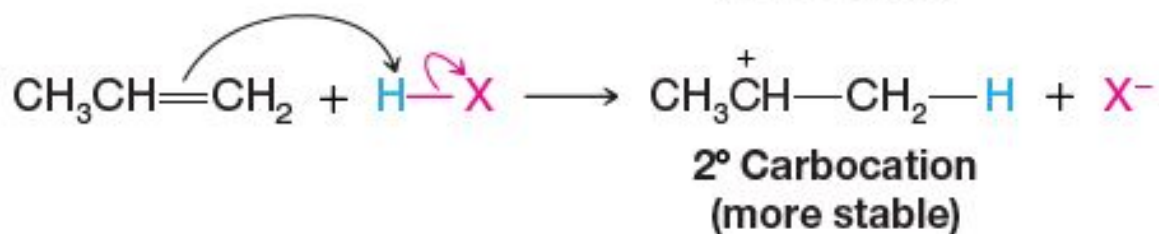
(bridged bromonium ion intermediates;
a pair of enantiomers)

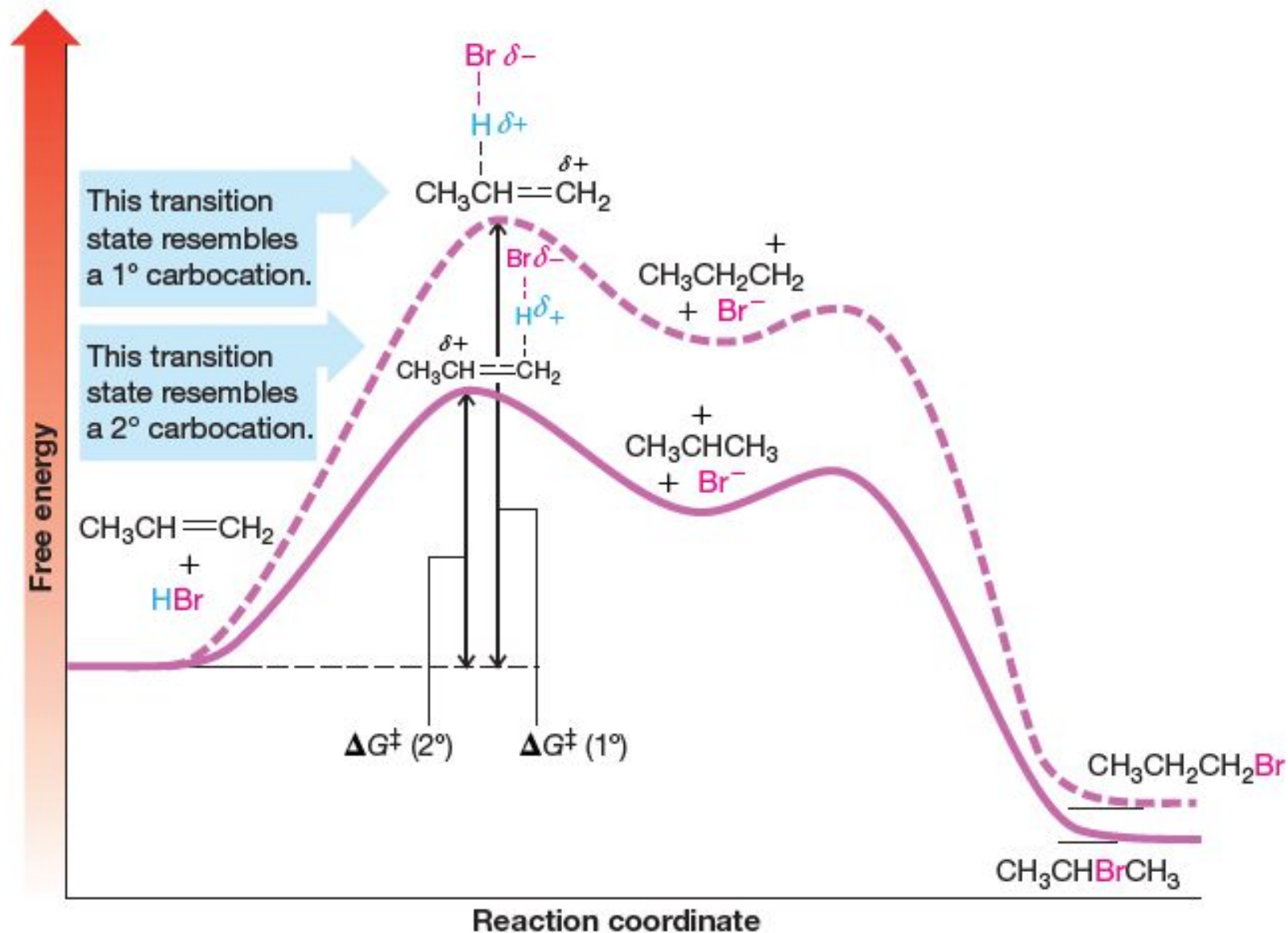


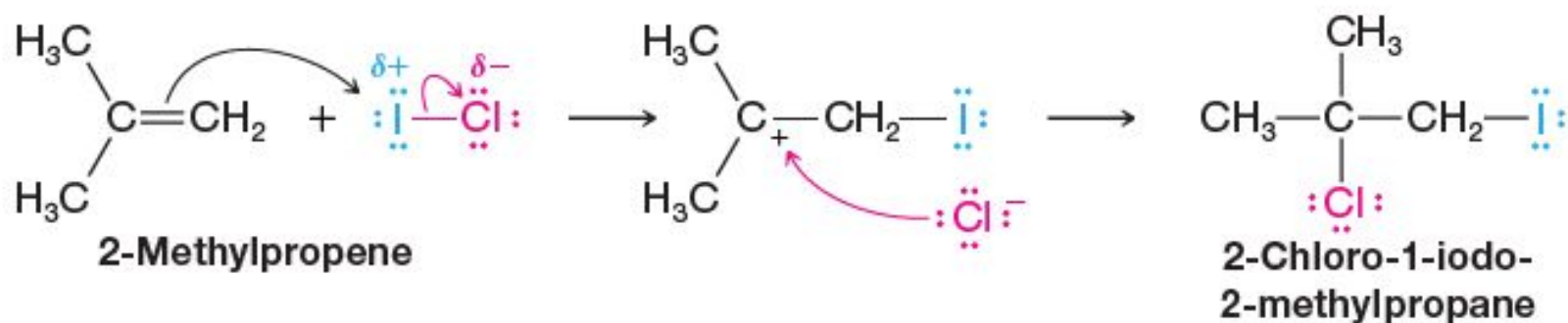


Identical









Write mechanisms for the following addition reactions:

