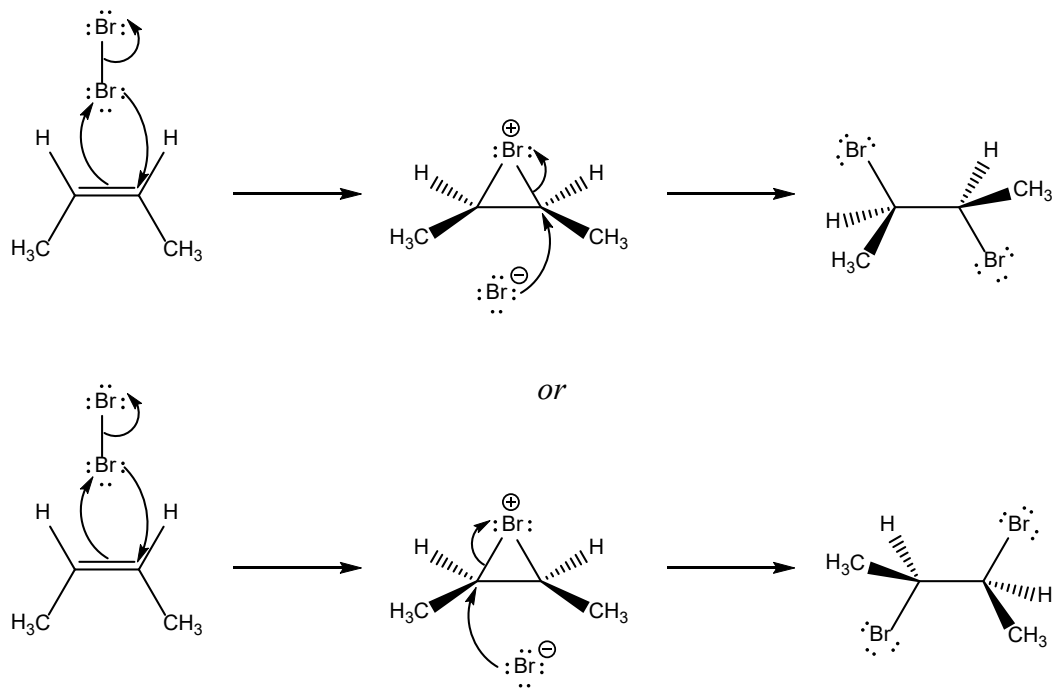


Answers to Exercise 11.6
Addition of “X₂” to Alkenes and Alkynes

1.

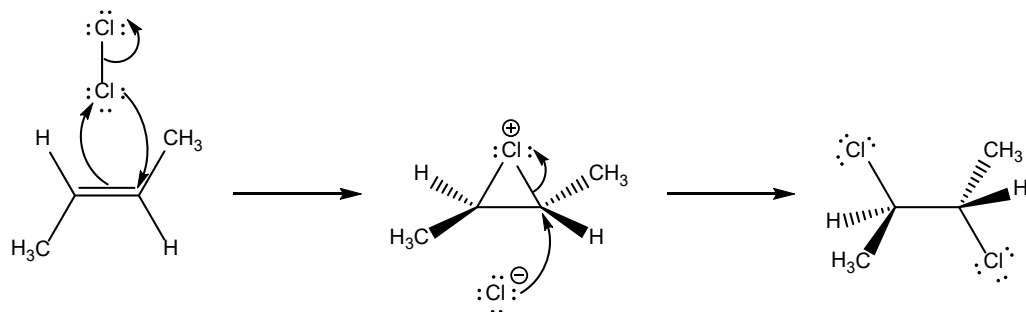


Since the product of this reaction is chiral, drawing either enantiomer is acceptable.

(The two options above show one way to generate each enantiomer.)

Note that the two methyl groups are cis- to each other in the alkene and in the bromonium ion.

2.

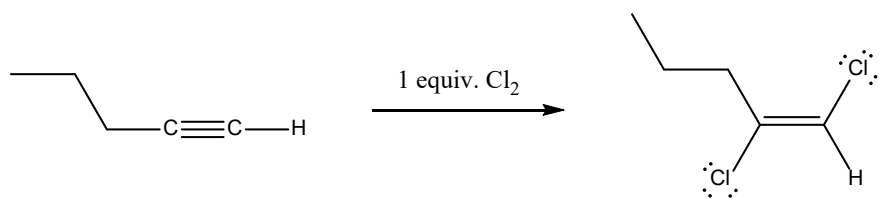


The product of this reaction is not chiral. Try building both this molecule and its mirror image with your model kit if you have trouble seeing this.

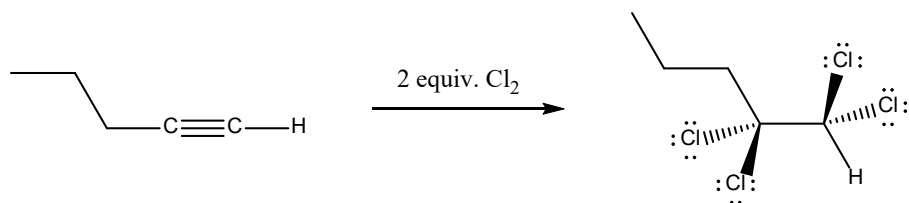
Note that the two methyl groups are trans- to each other in the alkene and in the chloronium ion.

3.

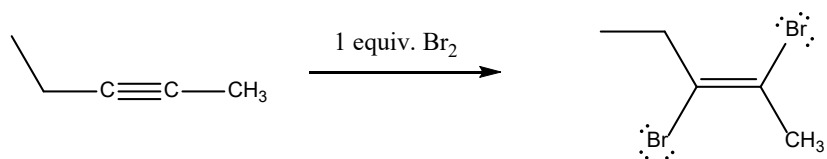
(a)



(b)



(c)



(d)

