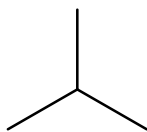
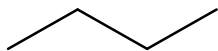


Answers to Exercise 10.2

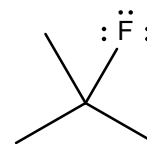
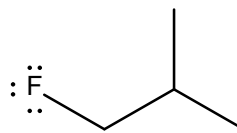
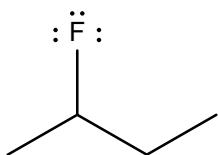
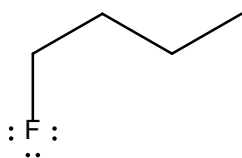
Structural Isomers

1. *Answers are shown in line-bond notation to make it easier to see how the structures differ. It is completely acceptable for your answers to be in expanded or condensed notation.*

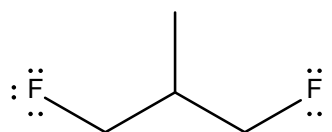
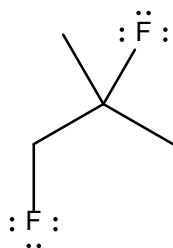
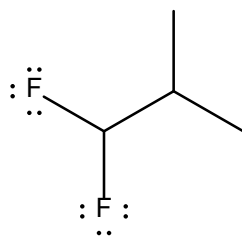
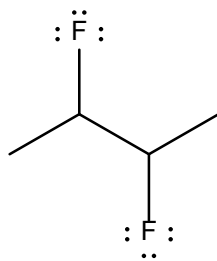
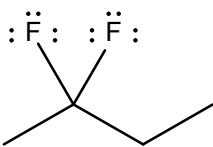
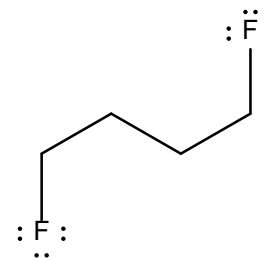
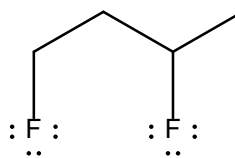
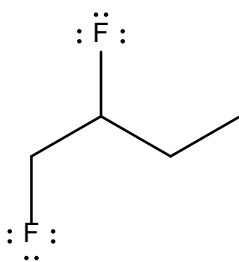
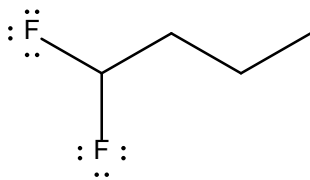
(a)



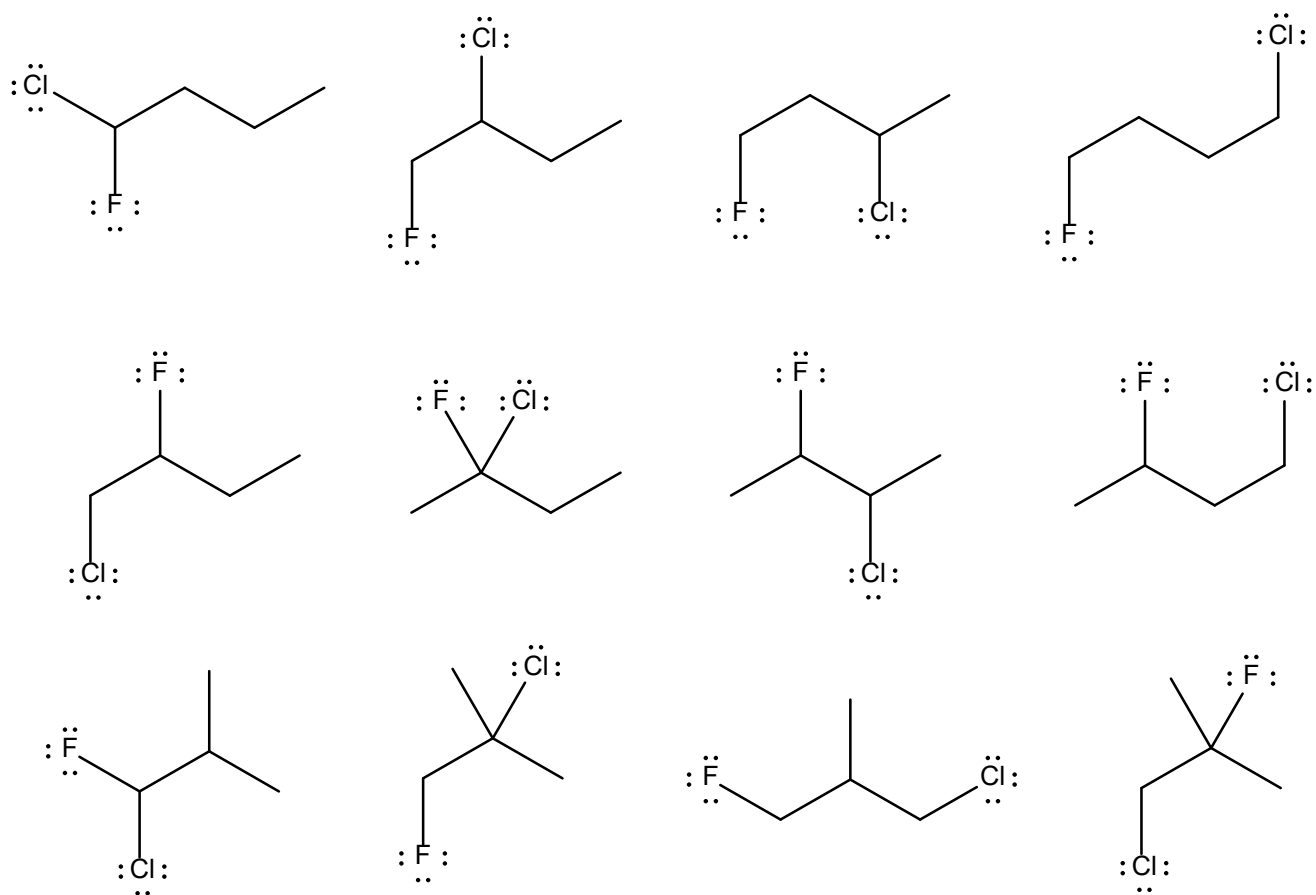
(b)



(c)

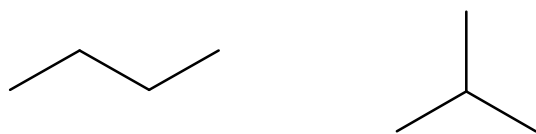


(d) There are 12 structural isomers for C_4H_8FCl . They are shown below.

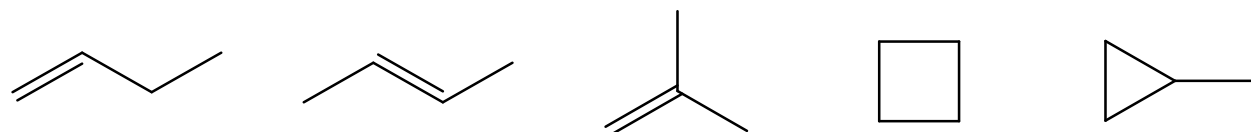


2. Only one stereoisomer for each answer is shown. If you drew *cis* instead of *trans*, it's still right. Answers are shown in line-bond notation to make it easier to see how the structures differ. It is completely acceptable for your answers to be in expanded or condensed notation.

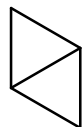
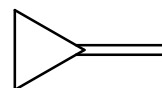
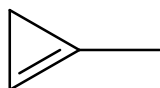
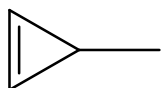
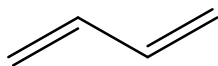
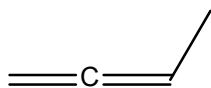
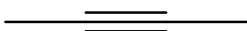
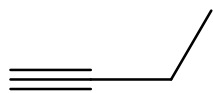
(a)




(b)



(c) There are 9 structural isomers for C_4H_6 . They are shown below.



There are no isomers for C_4H_6 starting with the  skeleton because there is no way to fit a triple bond or two double bonds without the central atom violating the octet rule.