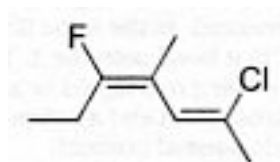
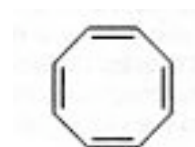
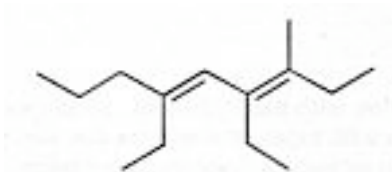
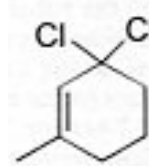
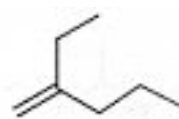
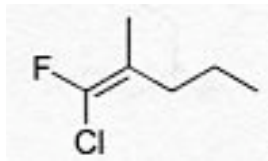
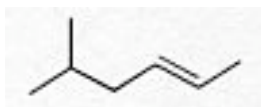


## ORGO/BIO CHAPTER 8 HW

1. Name the following alkenes.



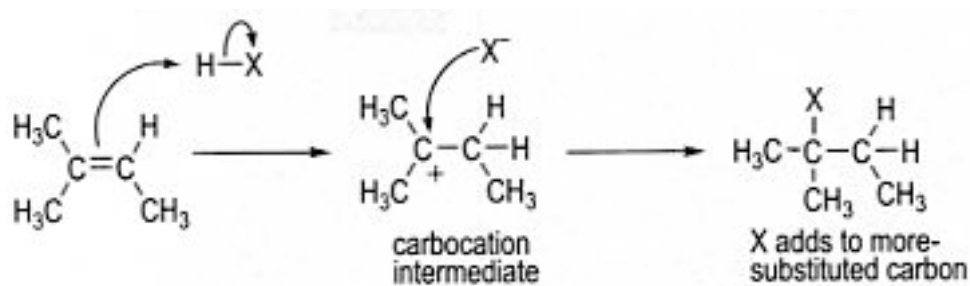
2. Draw line bond structures for the following molecules.

- 1-butene
- cyclohexene
- 2,4-heptadiene
- 3-methyl-1-pentene
- 3-methylcyclohexene (hint: double bond starts at C-1 in ring)
- cis-2-butene
- trans-2-butene
- 4-chloro-cis-2-pentene
- 3-fluoro-1-methylcyclopentene
- 1-ethyl-2,4-dimethylcyclohexene



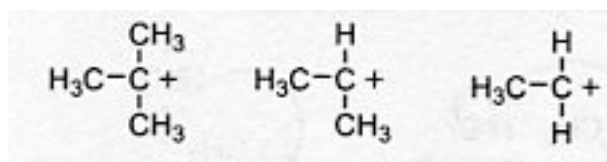
Addition reactions (“adding across a double bond”) of alkenes

General mechanism of hydrohalic (HX, where X is a halogen) addition to alkenes:

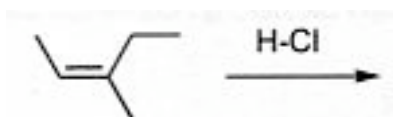
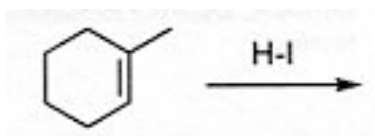
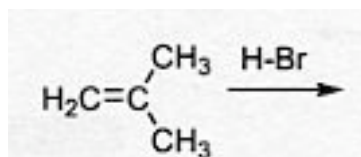


3. What is Markonikov's rule?

4. Rank the following carbocations from *most* stable to *least* stable:



5. Draw the products of the following reactions. Then draw the mechanism of the reaction, using arrow pushing to show the movement of electrons.



6. Draw the mechanism for the following reaction. Use arrow pushing. Hint: Begin by protonating the double bond outside of the ring.

