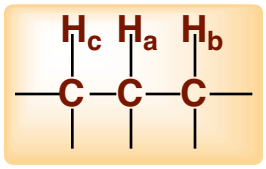
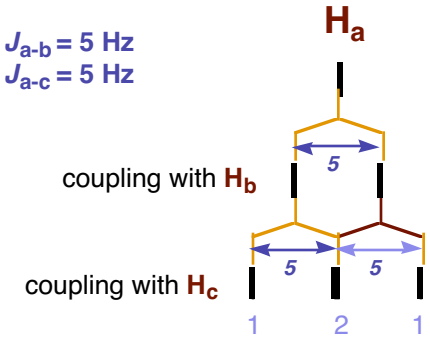
These notes can be obtained at: http://www.ndsu.nodak.edu/instruct/grcook/chem342/notes.shtml

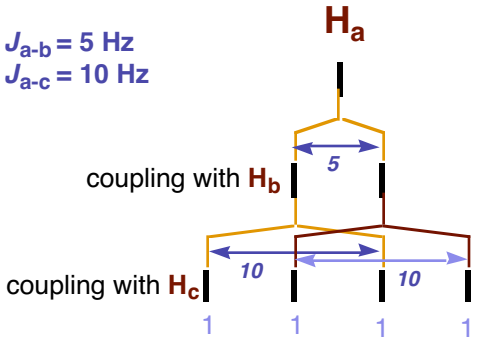
Chapter 13: Nuclear Magnetic Resonance Spectroscopy

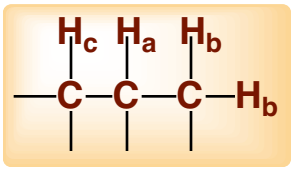
^{1}H NMR Spectroscopy

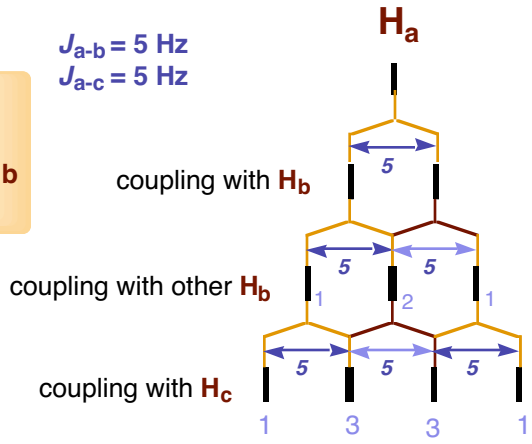
More complicated splitting occurs when there are non-equivalent hydrogens coupling the same nucleus with different coupling constants. The patterns can be predicted by building a splitting tree diagram with one nuclear coupling at each level.

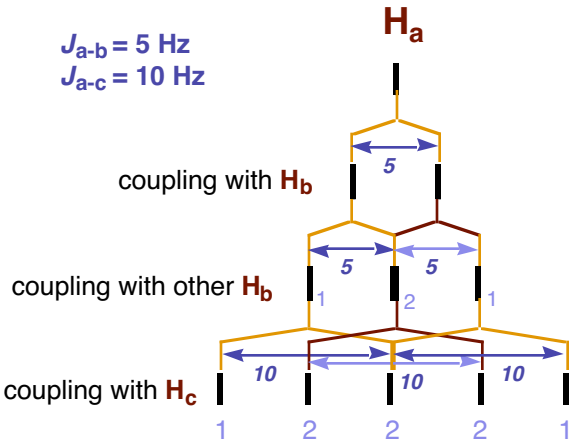












Strategies for using Spectroscopy to identify structures.

Find the molecular formula (MS)

Determine degrees of unsaturation

Identify functional groups (IR, NMR)

Try to find pieces of the structure (NMR #H's, coupling, number of carbons, etc.)

Try to put the pieces together in a reasonable way

Double check that your structure matches all the data given