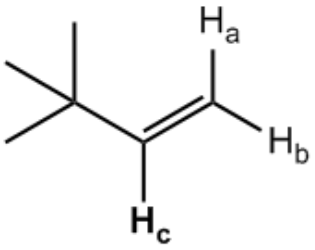
CONCEPT: ^{1}H NMR – SPIN-SPLITTING WITH J-VALUES AND TREE DIAGRAMS

Drawing Complex Tree Diagrams:

Now let's use an example where multiple J-values are involved. Always split in order of *highest to lowest* values.

- Before starting, what does the n + 1 Rule predict here? _____
  ANSWER

EXAMPLE: Use a tree diagram to predict the splitting pattern of the **bolded** proton.



J_{Ha} = *Trans*-Proton = 16 Hz

J_{Hb} = *Cis*-Proton = 10 Hz

PRACTICE: Draw a tree diagram for H^* in the structure below.

$\mathbf{F_2}CH^*CH(CH_3)_2$

J_{H^*-F} = 50 Hz

J_{H^*-H} = 7 Hz