Exercise: Analyze the NMR spectrum of the mixture of 3,5-diphenylbromocyclohexanes below (assign signals):

C₁₈H₁₉Br
270 MHz ^1H NMR spectrum in CDCl₃
Source: Mike Bowe/Reich (digitized hard copy)
Exercise: Analyze the NMR spectrum of the mixture of 3,5-diphenylbromocyclohexanes below (assign signals):

**C$_{18}$H$_{19}$Br**

270 MHz $^1$H NMR spectrum in CDCl$_3$

Source: Mike Bowe/Reich (digitized hard copy)

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**Major isomer**

This proton is an apparent pentet (2.7 Hz), from the four nearly equal $J_{eq-eq}$ and $J_{eq-ax}$ couplings.

**Minor isomer**

This proton is a triplet of triplets, from the two large $J_{ax-ax}$ couplings (11 Hz) and the two small $J_{ax-eq}$ couplings (2.8 Hz).