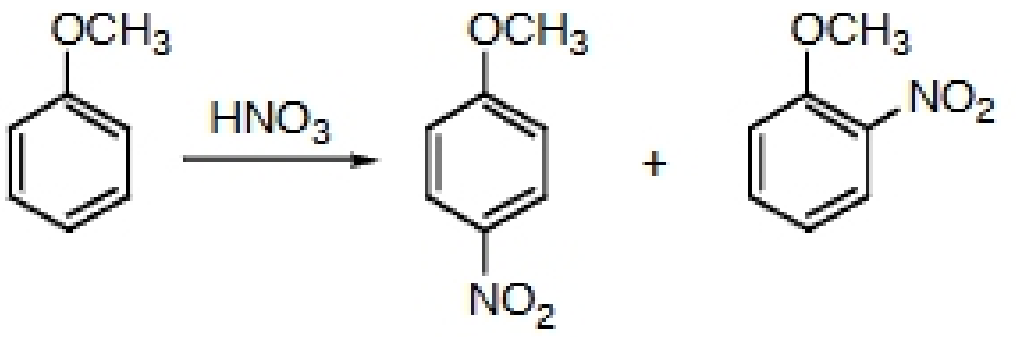
CHM 2212-Organic Chemistry II
February 28, 2002
Recitation #7
Dr. Bausch

Practice quiz

(covering material thru section 15.13)

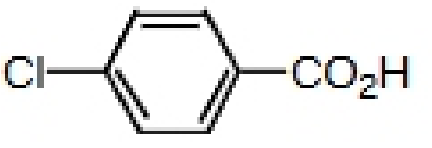
1. When anisole is nitrated, the major products are those shown:

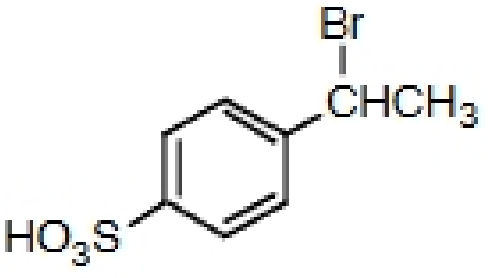


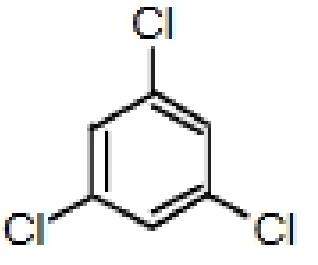
Draw the resonance contributors for the intermediate carbocation ("arenium ion") for either the ortho or para attack by NO_2^+. Indicate the resonance contributor that is more stable than the others.

No meta product forms. Draw the resonance forms for the intermediate carbocation that would lead to the *m*-nitroanisole. Why does this isomer not form?

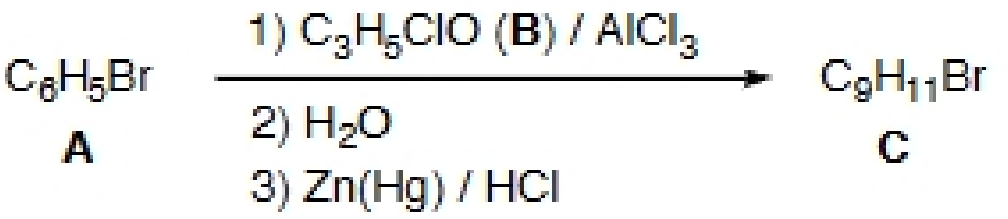
2. Outline how each of the following compounds could be made starting from benzene.



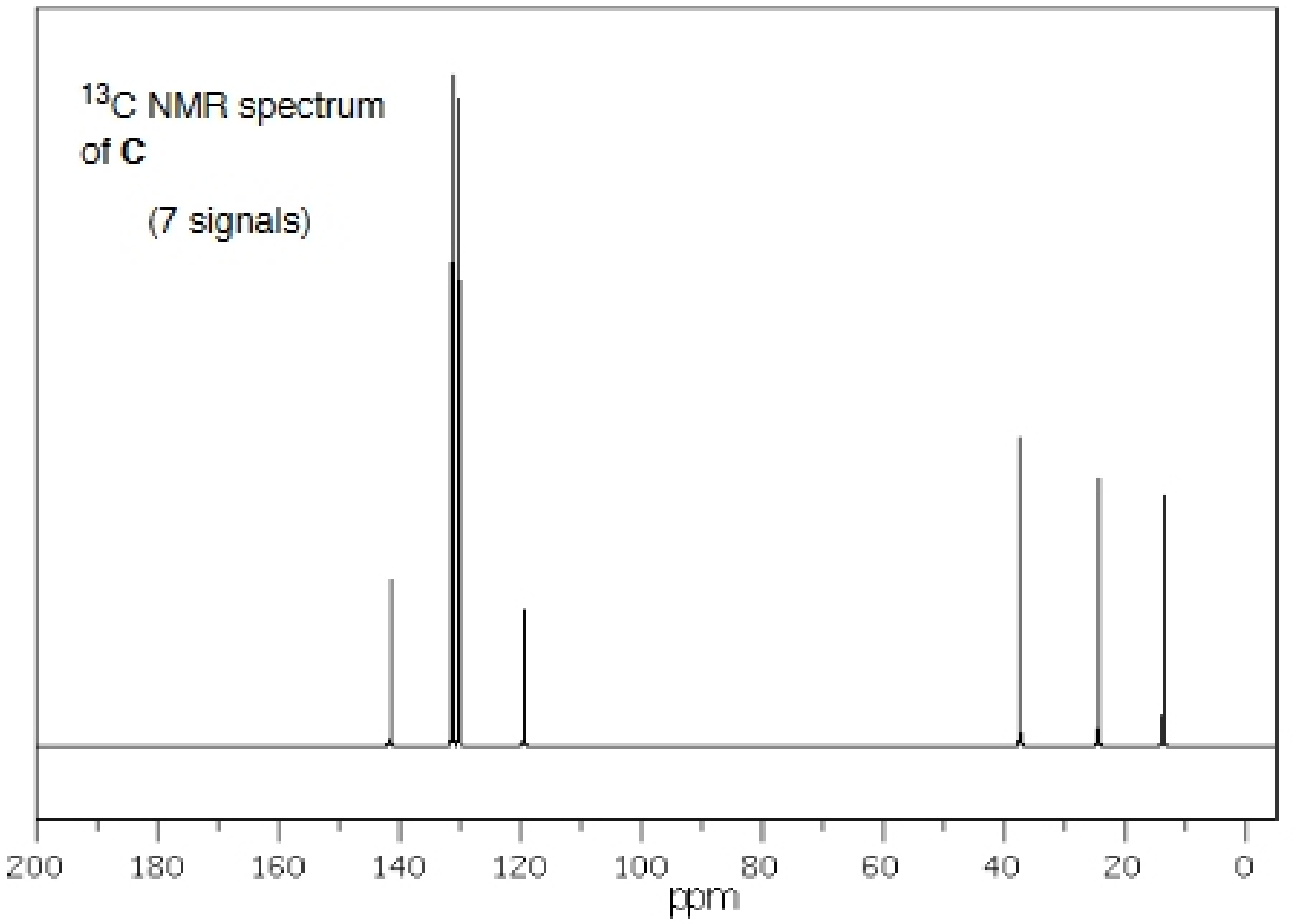


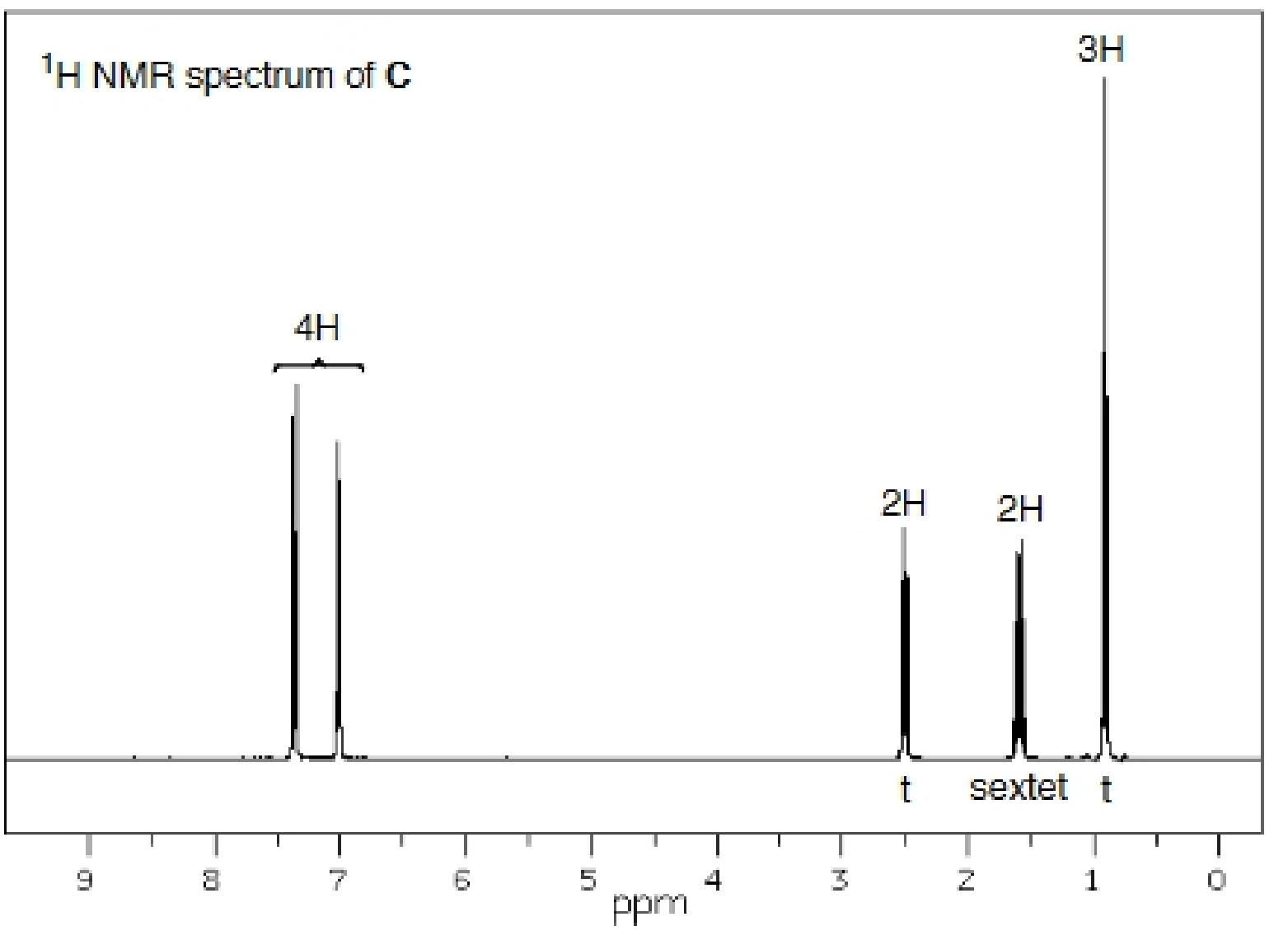


3. Consider the following synthetic transformation:



Product **C** is the isomer found in the highest yield in the reaction. The ^{13}C and ^{1}H NMR spectra of product **C** are given on the next page. Using the synthetic information together with the molecular formulas and NMR spectra, deduce the structures of **A**, **B**, and **C**.


^{13}C NMR spectrum of **C**
(7 signals)
200
180
160
140
120
100
80
60
40
20
0
ppm


^{1}H NMR spectrum of **C**
4H
3H
2H
2H
t
sextet
t
9
8
7
6
5
4
3
2
1
0
ppm