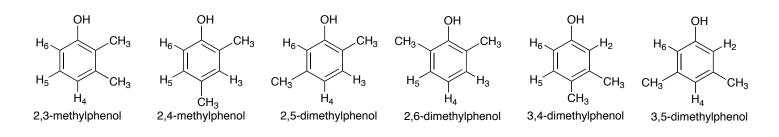
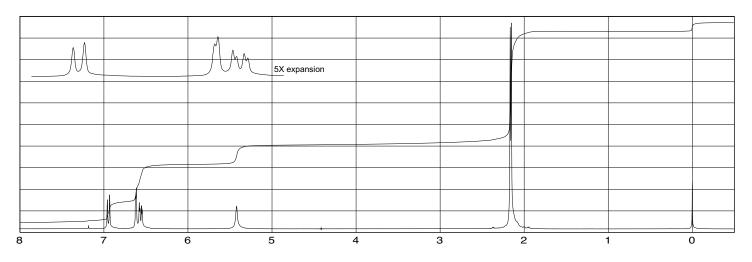
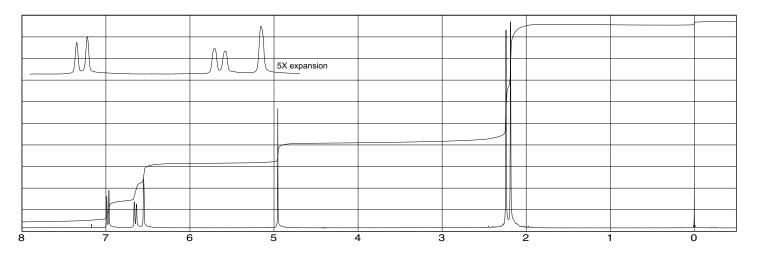
3. 300 MHz ¹H NMR spectra in CDCl₃ are shown below for five of the six isomers of dimethylphenol. Match each spectrum to the appropriate compound and assign the resonances of the spectrum to the appropriate protons in the compound. (15 points)



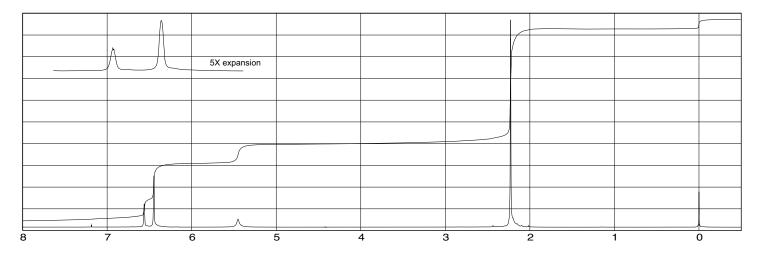
SPECTRUM A. **Identify the compound** (here) ______ and **label the peaks** (below) with the corresponding proton (with labels selected among H_2 , H_3 , H_4 , H_5 , and H_6 as appropriate).



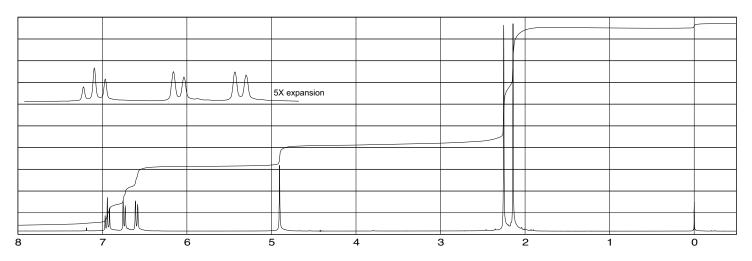
SPECTRUM B. **Identify the compound** (here) ______ and **label the peaks** (below) with the corresponding proton (with labels selected among H_2 , H_3 , H_4 , H_5 , and H_6 as appropriate).



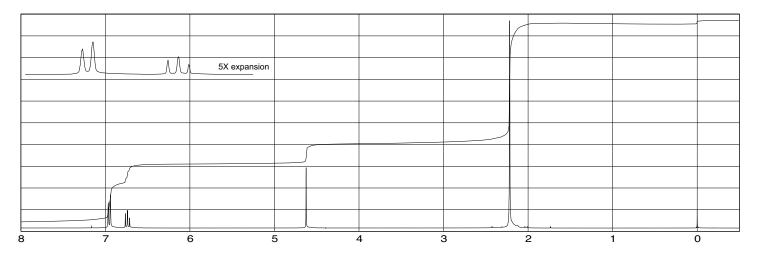
SPECTRUM C. Identify the compound (here) ______ and label the peaks (below) with the corresponding proton (with labels selected among H_2 , H_3 , H_4 , H_5 , and H_6 as appropriate).



SPECTRUM D. Identify the compound (here) ______ and label the peaks (below) with the corresponding proton (with labels selected among H_2 , H_3 , H_4 , H_5 , and H_6 as appropriate).



SPECTRUM E. Identify the compound (here) ______ and label the peaks (below) with the corresponding proton (with labels selected among H_2 , H_3 , H_4 , H_5 , and H_6 as appropriate).



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