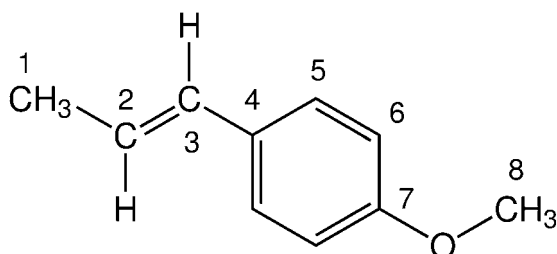


Problem 16

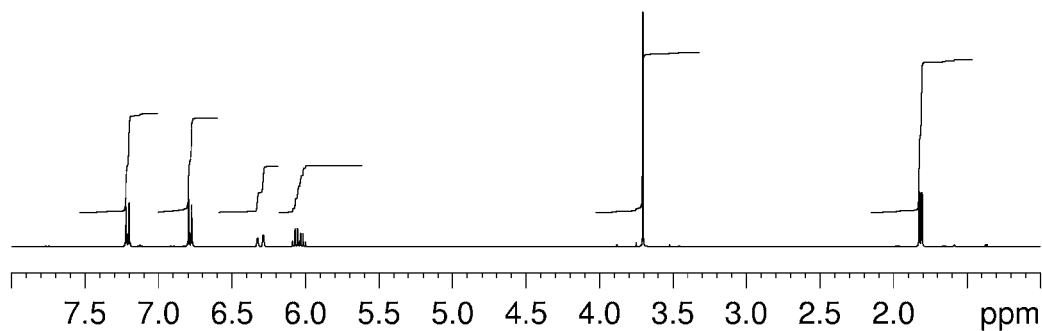
The ^1H NMR spectrum of *trans*-anethole ($\text{C}_{10}\text{H}_{12}\text{O}$) recorded in CDCl_3 solution at 298 K and 400 MHz is given below.

The ^1H NMR spectrum has signals at δ 1.82 (dd, $J = 6.6, 1.7$ Hz, 3H, H_1), 3.71 (s, 3H, H_8), 6.04 (dq, $J = 15.8, 6.6$ Hz, 1H, H_2), 6.30 (dq, $J = 15.8, 1.7$ Hz, 1H, H_3), 6.78 (m, 2H, H_6) and 7.21 (m, 2H, H_5) ppm.

Use this information to produce schematic diagrams of the COSY and NOESY spectra, showing where all of the cross peaks and diagonal peaks would be.



^1H NMR Spectrum
(CDCl_3 , 400 MHz)



^1H NMR Expansion
(CDCl_3 , 400 MHz)

