

1 Complete the table about the NMR spectra of the compounds shown.

compound	¹³ C NMR	¹ H NMR		
	number of signals	number of signals	relative intensity	splitting pattern
	4	3	3:2:3	sq t
$H_{3}C \xrightarrow{Br} C \xrightarrow{CH_{3}} H_{2}C \xrightarrow{H_{2}} C \xrightarrow{H_{3}} C \xrightarrow{H_{2}} C \xrightarrow{H_{3}} C \xrightarrow{H_{{3}} C \xrightarrow{H_{{3}} C \xrightarrow{H_{{3}}} C \xrightarrow{H_{{3}} C$	7	5	3:1:6:2:3	s s s q t

2 The ¹H NMR spectrum of a compound with the molecular formula $C_9H_{16}O_2$ is shown. Deduce the structure of the compound.

