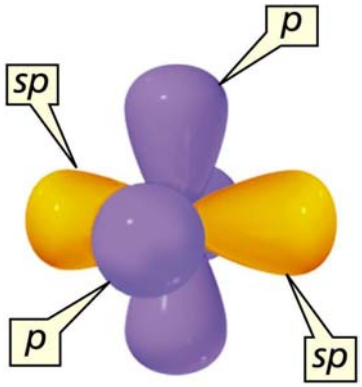
2) Determine the principle functional group and its position.

principal functional group	*formula*	*ending becomes*
alkane	C-C	-ane
alkene	C=C	-ene
alkyne	C≡C	-yne
alcohol	-OH	-anol
aldehyde	-CH=O	-anal
ketone	>C=O	-anone
carboxylic acid	-COOH	-anoic acid

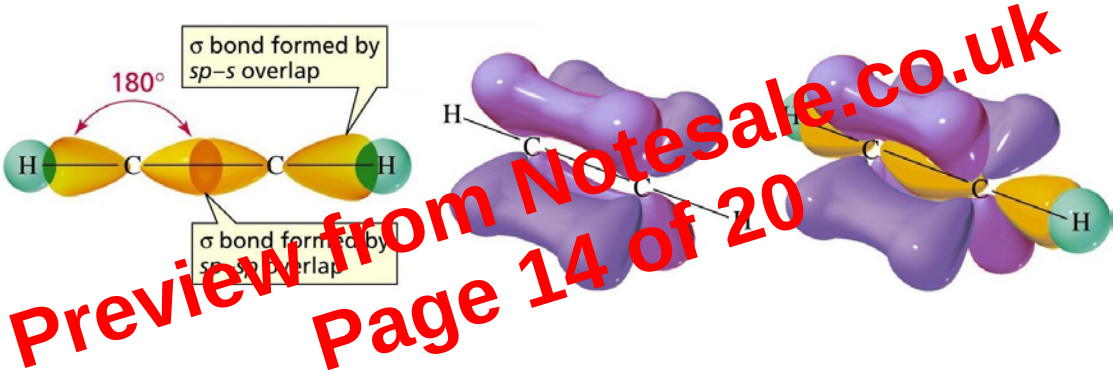
Position is indicated, where necessary, by numbering the carbons in the main chain. Position need not be indicated for alkanes, as they have no functional group, and aldehydes and acids, as they are terminal functional groups. Positioning numbers are flanked by dash signs. Multiple positions for a given functional group are separated by commas and indicated by the prefixes di, tri, tetra, penta, hexa, hepta, octa , nona and deca.

3) Ancilliary functional groups are given in alphabetical order, with their position at the beginning of the name.

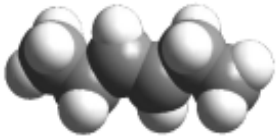
ancilliary functional group	*formula*	*prefix*
methyl	$-CH_3$	methyl
ethyl	$-C_2H_5$	ethyl



ALL linear carbons such as those found in triple bonds are sp hybridised. The unused p orbitals on each carbon overlap to form the π parts of the triple bond, e.g. ethyne (acetylene).



The Alkenes



A homologous series of unsaturated compounds with general molecular formula C_nH_{2n} (n is an integer greater than 1) that contain a double bond.

ethene C_2H_4, propene C_3H_6, butene C_4H_8, pentene C_5H_{10}, hexene C_6H_{12}, heptene C_7H_{14}, octene C_8H_{16}, nonene C_9H_{18}, decene $C_{10}H_{20}$, etc.

Preparation

Alkenes are defined by the presence of a C=C double bond. In the laboratory, they can be prepared *via* the dehydration of alcohols by strong acid.

$$CH_3CH_2OH \xrightarrow{H^+(aq)} CH_2{=}CH_2 + H_2O$$

One of the most important principles in organic chemistry is the understanding of how reactions happen at a molecular level. This is termed the reaction mechanism.

Mechanisms are represented by "pushing electrons" between and/or around molecules. The arrows MUST be accurately drawn to show both the origin and destination of the electrons.