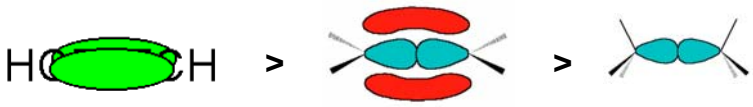
Kinds of Hybridization

sp^n hybridization obtained by mixing the **2s** atomic orbital with **n different 2p** atomic orbitals to yield **(n+1) hybrids**.

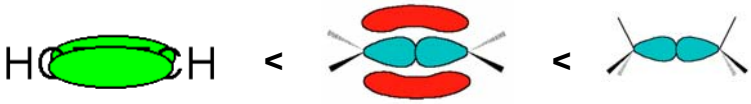
	geometry	VSEPR groups	Orbitals	Where found	# Pi bonds
sp	linear	2			2
sp^2	trigonal planar	3			1
sp^3	tetrahedral	4			0

Preview from Notesale.co.uk
Page 6 of 12

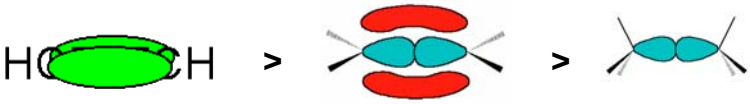
Bonding strength



Bonding length



Bonding energy



Covalent Bonding in Organic Compound

- In organic compound, carbon, a member of group IV form four covalent bonds because of it has four electrons in its outer shell and need four more to attain a stable octet.
- More than any other element, carbon tends to share electrons with atoms of its own kinds.
- It could be possible of forming:
  - Single bond
  - Double bond
  - Triple bond

Preview from Notesale.co.uk
Page 9 of 12

Line Angle Formula

- It is also called as skeletal structure or a stick figure.
- Rules
  i. Each bond is represented by a line
  ii. Each C atoms assumed to be present when 2 lines meet or line begins/ends.
  iii. Each C atom is assumed to have enough H atoms (which each C has total of 4 bonds)
  iv. H atom are not usually shown unless bonded to a drawn atom.
  v. N, O and halogen atom are shown.

C_3H_8

$CH_3CH_2CH_3$

$H_3C \cdot CH_2 \cdot CH_3$

Condensed structure

skeletal