

1/31/11

VSEPR Valence Shell Electron Pair Repulsion

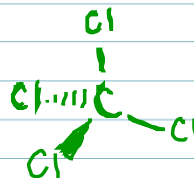
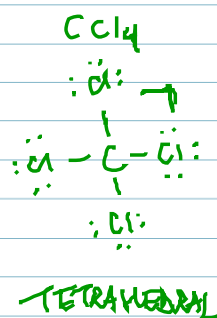
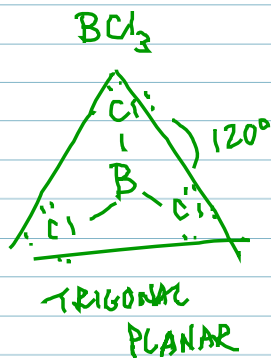
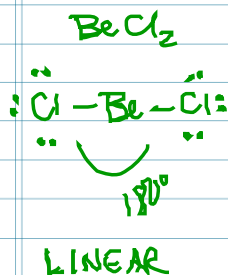
→ used to predict the 3D shape of a molecule

→ allow the e^- pairs on the central atom (bonding & lone pairs) to move as far apart from each other as possible

→ lone pairs take up more space than bonding pairs (distorts geometry)

DIATOMICS $H_2, N_2, O_2, F_2, Cl_2, Br_2, I_2$

CO HCl LINEAR



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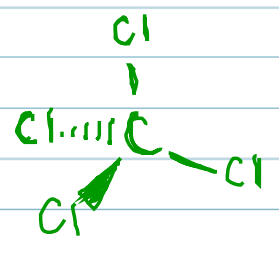
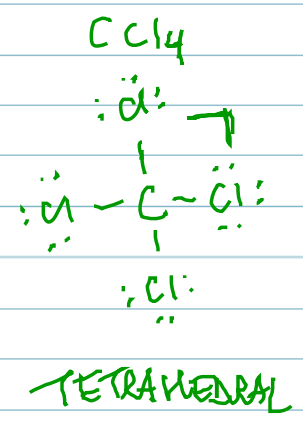
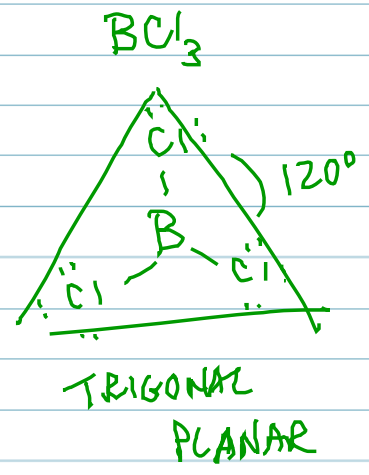
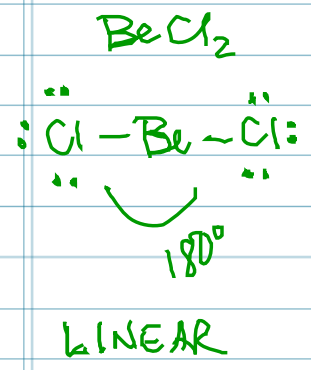
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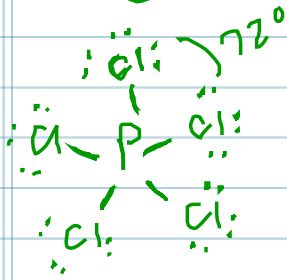
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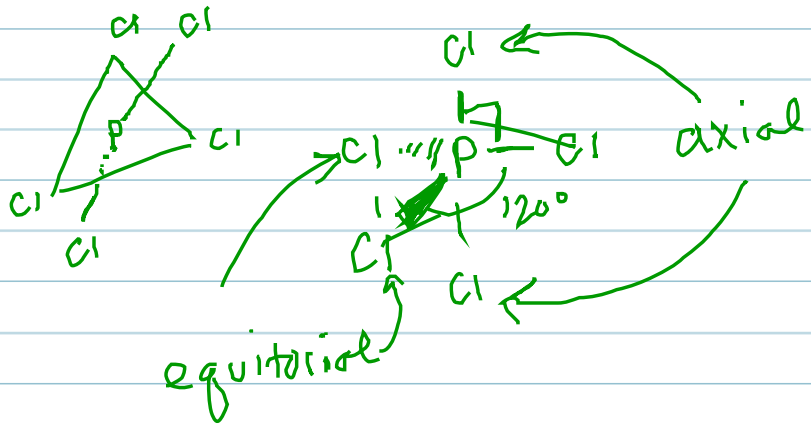
CO HCl LINEAR



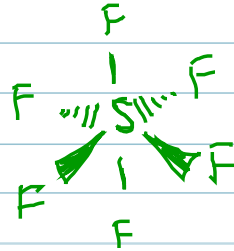
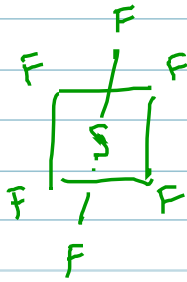
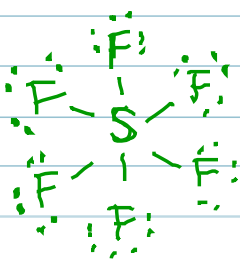
PCl_5



TRIGONAL
BIPYRAMIDAL

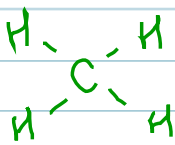


SF_6

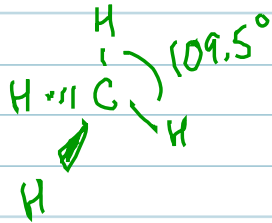


OCTAHEDRAL

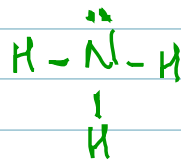
CH_4



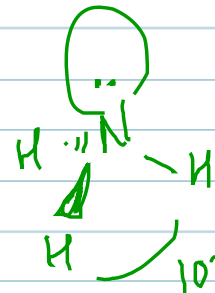
tetrahedral



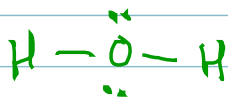
NH_3



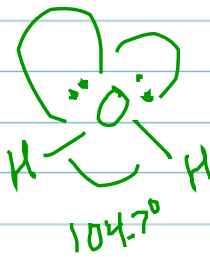
pyramidal



H_2O



ANGULAR



HF

