

in plane of paper



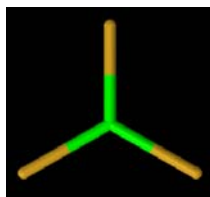
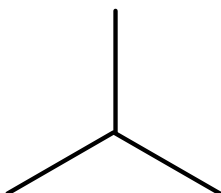
out of plane in front



out of plane in back

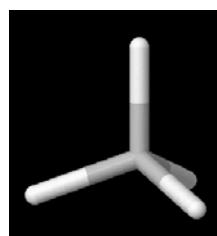
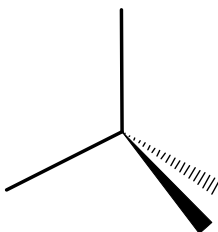
Trigonal planar - BF_3

What are the bond angles in the ideal structures?



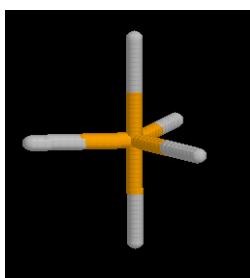
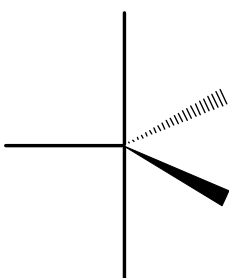
[Chime structure](#)

Tetrahedral - CH_4



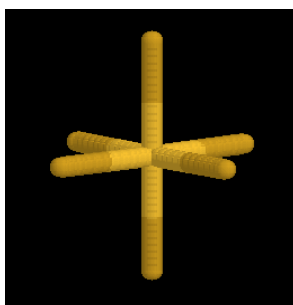
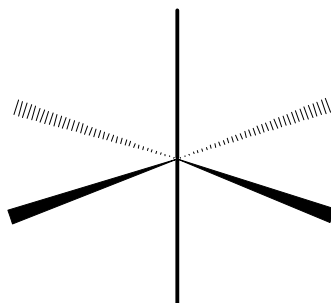
[Chime structure](#)

Trigonal bipyramidal (tbp) - PCl_5



[Chime structure](#)

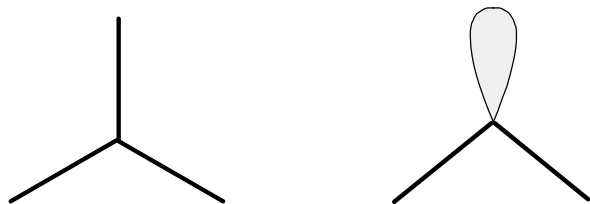
Octahedral - SF_6



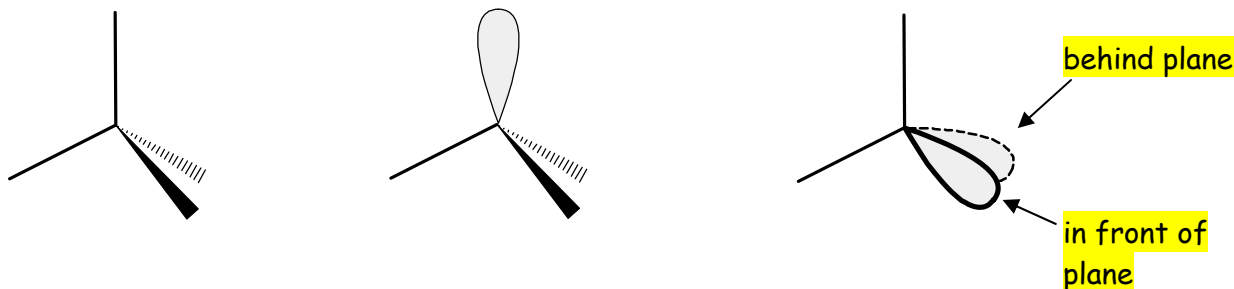
[Chime structure](#)

Dealing with Lone Pairs of Electrons on the Drawings - Which structures are distorted by the presence of the lone pair or pairs? Illustrate distortion with arrows. Circle the structures with lone pairs that are symmetrical.

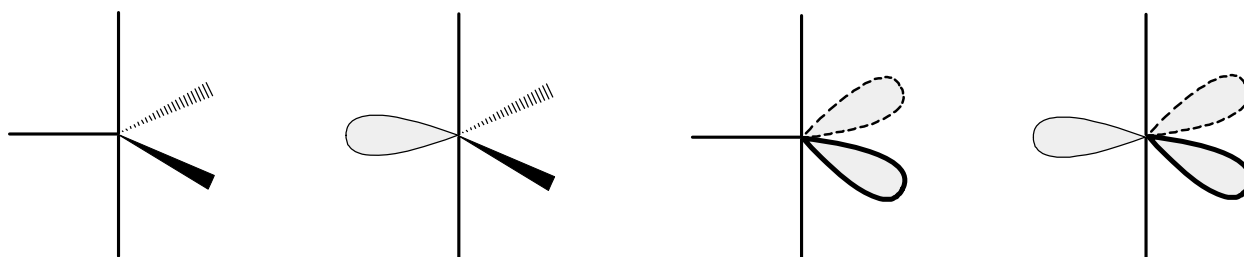
Trigonal planar



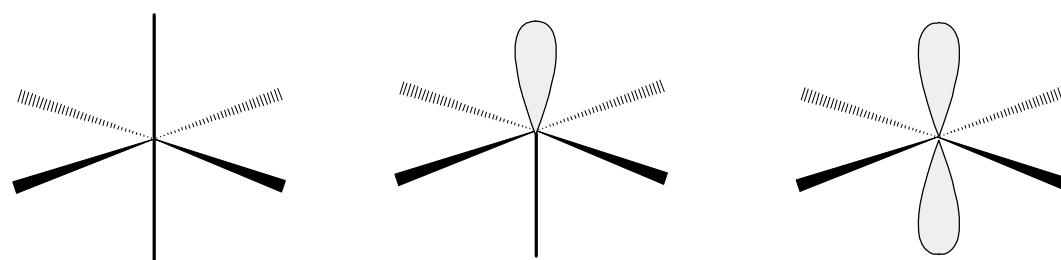
Tetrahedral



Trigonal bipyramidal (tbp)



Octahedral



Wedge diagrams from ChemSketch stereo templates (<http://www.acdlabs.com>)

Chime structures from <http://www.wellesley.edu/Chemistry/Flick/molecules/newlist.html>