
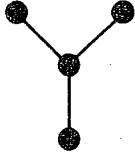
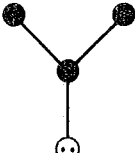
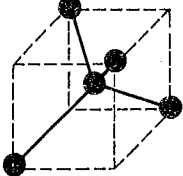
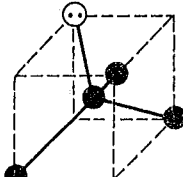
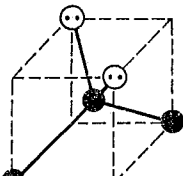
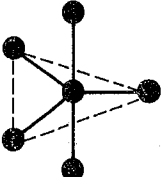
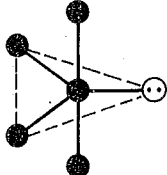
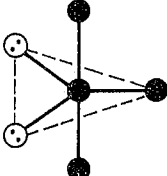
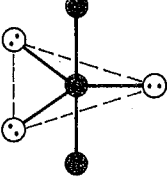
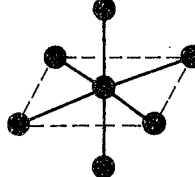
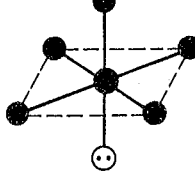
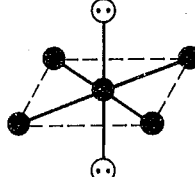


Lewis Structures and the VSEPR Method

SN	Number of lone pairs	Molecular shape	Example
2	0	 linear	$\text{BeH}_2, \text{CO}_2$
3	0	 trigonal planar	SO_3, BF_3
3	1	 angular	SO_2, O_3
4	0	 tetrahedral	$\text{CH}_4, \text{CF}_4,$ SO_4^{2-}
4	1	 trigonal pyramidal	$\text{NH}_3, \text{PF}_3,$ AsCl_3
4	2	 angular	$\text{H}_2\text{O}, \text{H}_2\text{S},$ SF_2
5	0	 trigonal bipyramidal	$\text{PF}_5, \text{PCl}_5,$ AsF_5

SN	Number of lone pairs	Molecular shape	Example
5	1	 sawhorse	SF_4
5	2	 T-shaped	ClF_3
5	3	 linear	$\text{XeF}_2, \text{I}_3^-,$ IF_2^-
6	0	 octahedral	$\text{SF}_6, \text{PF}_6^-,$ SiF_6^{2-}
6	1	 square pyramidal	$\text{IF}_5, \text{BrF}_5$
6	2	 square planar	$\text{XeF}_4, \text{IF}_4^-$

Molecular shapes predicted by the VSEPR method.