
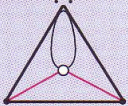
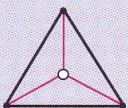
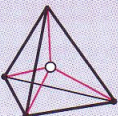
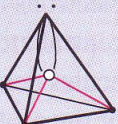
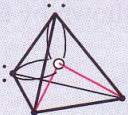
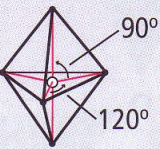
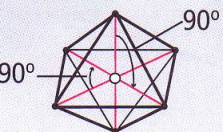


TABLE 6-5 VSEPR and Molecular Geometry

	Molecular shape	Atoms bonded to central atom	Lone pairs of electrons	Type of molecule	Formula example	Lewis structure
Linear		2	0	AB ₂	BeF ₂	$\text{:}\ddot{\text{F}}\text{--Be--}\ddot{\text{F}}\text{:}$
Bent or angular		2	1	AB ₂ E	SnCl ₂	$\text{:}\ddot{\text{Cl}}\text{--}\ddot{\text{Sn}}\text{--}\ddot{\text{Cl}}\text{:}$
Trigonal-planar		3	0	AB ₃	BF ₃	$\text{:}\ddot{\text{F}}\text{--}\ddot{\text{B}}\text{--}\ddot{\text{F}}\text{:}$ $\text{:}\ddot{\text{F}}\text{:}$
Tetrahedral		4	0	AB ₄	CH ₄	$\begin{array}{c} \text{H} \\ \\ \text{H--C--H} \\ \\ \text{H} \end{array}$
Trigonal-pyramidal		3	1	AB ₃ E	NH ₃	$\begin{array}{c} \ddot{\text{N}} \\ \\ \text{H H H} \end{array}$
Bent or angular		2	2	AB ₂ E ₂	H ₂ O	$\begin{array}{c} \ddot{\text{O}} \\ \\ \text{H H} \end{array}$
Trigonal-bipyramidal		5	0	AB ₅	PCl ₅	$\begin{array}{c} \text{:}\ddot{\text{Cl}}\text{:}\ddot{\text{Cl}}\text{:} \\ \quad \\ \text{:}\ddot{\text{Cl}}\text{--}\ddot{\text{P}}\text{--}\ddot{\text{Cl}}\text{:} \\ \quad \\ \text{:}\ddot{\text{Cl}}\text{:}\ddot{\text{Cl}}\text{:} \end{array}$
Octahedral		6	0	AB ₆	SF ₆	$\begin{array}{c} \text{:}\ddot{\text{F}}\text{:}\ddot{\text{F}}\text{:}\ddot{\text{F}}\text{:} \\ \quad \quad \\ \text{:}\ddot{\text{F}}\text{--}\ddot{\text{S}}\text{--}\ddot{\text{F}}\text{--}\ddot{\text{F}}\text{:} \\ \quad \quad \\ \text{:}\ddot{\text{F}}\text{:}\ddot{\text{F}}\text{:}\ddot{\text{F}}\text{:} \end{array}$