

Molecular Shapes Using VSEPR



# of Structural Pairs (Electronic Structure)	# of Sigma Bonding Groups	# of Lone Pair Groups	General Formula	Shape (Molecular Structure)	Example	Projection Model
2 Linear	2	0	AB ₂	Linear	CO ₂	
	1	1	AB	Linear	CO	
3 Trigonal Planar	3	0	AB ₃	Trigonal Planar	BF ₃	
	2	1	AB ₂	Bent	O ₃	
	1	2	AB	Linear	O ₂	
4 Tetrahedral	4	0	AB ₄	Tetrahedral	CCl ₄	
	3	1	AB ₃	Trigonal Pyramidal	NH ₃	
	2	2	AB ₂	Bent	H ₂ O	
	1	3	AB	Linear	HCl	

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5 Trigonal Bipyramidal	5	0	AB ₅	Trigonal Bipyramidal	PCl ₅	
	4	1	AB ₄	Seesaw	SF ₄	
	3	2	AB ₃	T-Shaped	ClF ₃	
	2	3	AB ₂	Linear	KrF ₂	
6 Octahedral	6	0	AB ₆	Octahedral	SF ₆	
	5	1	AB ₅	Square Pyramidal	BrF ₅	
	4	2	AB ₄	Square Planar	XeF ₄	