

Table of VSEPR Shapes

Relationship between numbers of bonding and unshared electron pairs and molecular structure					
<i>Molecular type^d</i>	<i>Total number of electron pairs about central atom</i>	<i>Number of single-bonding electron pairs</i>	<i>Number of unshared electron pairs (E)</i>	<i>Arrangement of atoms about central atom*</i>	<i>Example</i>
AX ₂	2	2	0	Linear	BeH ₂
AX ₃	3	3	0	Trigonal planar	BCl ₃
AX ₂ E	3	2	1	Nonlinear	SO ₂
AX ₄	4	4	0	Tetrahedral	CH ₄
AX ₃ E	4	3	1	Trigonal pyramidal	NH ₃
AX ₂ E ₂	4	2	2	Nonlinear	H ₂ O
AX ₅	5	5	0	Trigonal bipyramidal	PF ₅
AX ₄ E	5	4	1	Seesaw ^b	TeCl ₄
AX ₃ E ₂	5	3	2	T-shaped ^b	ClF ₃
AX ₂ E ₃	5	2	3	Linear ^b	XeF ₂
AX ₆	6	6	0	Octahedral	SF ₆
AX ₅ E	6	5	1	Square pyramidal	BrF ₅
AX ₄ E ₂	6	4	2	Square planar ^c	BrF ₄ ⁻

^b Nonbonding electron pairs are in the triangular plane.
^c Nonbonding electron pairs are 180° apart.