

Geometries for Inorganic Compounds

Electron Domains	Bonding Domains	Lone-Pair Domains	Hybrid Orbitals	Geometry and Name
2	2	0	sp	$\begin{array}{c} X - A - X \\ \text{linear} \end{array}$
3	3	0	sp^2	$\begin{array}{c} X \\ \\ A \\ / \quad \backslash \\ X \quad X \\ \text{trigonal planar} \end{array}$
3	2	1	sp^2	$\begin{array}{c} \bullet\bullet \\ \\ A \\ / \quad \backslash \\ X \quad X \\ \text{bent or V-shaped} \end{array}$
4	4	0	sp^3	$\begin{array}{c} X \\ \\ A \\ / \quad \backslash \quad \backslash \\ X \quad \text{dotted} \quad \text{wedge} \quad X \\ \text{tetrahedral} \end{array}$
4	3	1	sp^3	$\begin{array}{c} \bullet\bullet \\ \\ A \\ / \quad \backslash \quad \backslash \\ X \quad \text{dotted} \quad \text{wedge} \quad X \\ \text{trigonal pyramidal} \end{array}$
4	2	2	sp^3	$\begin{array}{c} X \\ \\ A \\ / \quad \backslash \quad \backslash \\ X \quad \text{dotted} \quad \text{wedge} \quad \bullet\bullet \\ \text{bent or V-shaped} \end{array}$

Electron Domains	Bonding Domains	Lone-Pair Domains	Hybrid Orbitals	Geometry and Name
5	5	0	dsp^3	<p>trigonal bipyramidal</p>
5	4	1	dsp^3	<p>see-saw</p>
5	3	2	dsp^3	<p>T-shaped</p>
5	2	3	dsp^3	<p>linear</p>
Electron Domains	Bonding Domains	Lone-Pair Domains	Hybrid Orbitals	Geometry and Name
6	6	0	d^2sp^3	<p>octahedral</p>
6	5	1	d^2sp^3	<p>square pyramidal</p>
6	4	2	d^2sp^3	<p>square planar</p>