

Lewis Structures & Molecular Geometry – Formula Sheet:

Chemical Formula	Electron Geometry	Molecular Geometry	Bond Angles	Polar or Nonpolar	Hybridization Center Atom	Bonding Groups	Lone Pairs	Electron Groups
<i>CO₂</i>	Linear	Linear	180°	Nonpolar	<i>sp</i>	2	0	2
<i>BF₃</i>	Trigonal Planar	Trigonal Planar	120°	Nonpolar	<i>sp²</i>	3	0	3
<i>SO₂</i>	Trigonal Planar	Bent	< 120°	Polar	<i>sp²</i>	2	1	3
<i>CH₄</i>	Tetrahedral	Tetrahedral	109.5°	Nonpolar	<i>sp³</i>	4	0	4
<i>NH₃</i>	Tetrahedral	Trigonal Pyramidal	107°	Polar	<i>sp³</i>	3	1	4
<i>H₂O</i>	Tetrahedral	Bent	104.5°	Polar	<i>sp³</i>	2	2	4
<i>PCl₅</i>	Trigonal Bipyramidal	Trigonal Bipyramidal	120° 90°	Nonpolar	<i>dsp³</i>	5	0	5
<i>SF₄</i>	Trigonal Bipyramidal	Seesaw	< 120° < 90°	Polar	<i>dsp³</i>	4	1	5
<i>IF₃</i>	Trigonal Bipyramidal	T-Shaped	< 90°	Polar	<i>dsp³</i>	3	2	5
<i>XeF₂</i>	Trigonal Bipyramidal	Linear	180°	Nonpolar	<i>dsp³</i>	2	3	5
<i>SF₆</i>	Octahedral	Octahedral	90°	Nonpolar	<i>d²sp³</i>	6	0	6
<i>IF₅</i>	Octahedral	Square Pyramidal	< 90°	Polar	<i>d²sp³</i>	5	1	6
<i>XeF₄</i>	Octahedral	Square Planar	90°	Nonpolar	<i>d²sp³</i>	4	2	6