
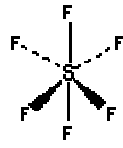



## The Relationship Between the Number of Places Where Valence Electrons Can Be Found and the Gemetry Around an Atom

Places Where Electrons are Found	Places With Bonding Electrons	Places With Non-bonding Electrons	Distribution of Electrons	Molecular Geometry	Examples	
2	2	0	linear	linear	BeF <sub>2</sub> , CO <sub>2</sub>	
	1	1		linear	CO, N <sub>2</sub>	
3	3	0	trigonal planar	trigonal planar	BF <sub>3</sub> , CO <sub>3</sub> <sup>2-</sup>	
	2	1		bent	O <sub>2</sub> , SO <sub>2</sub>	
	1	2		linear	O <sub>2</sub>	
4	4	0	tetrahedral	tetrahedral	CH <sub>4</sub> , SO <sub>4</sub> <sup>2-</sup>	
	3	1		trigonal pyramidal	NH <sub>3</sub> , H <sub>3</sub> O <sup>+</sup>	
	2	2		bent	H <sub>2</sub> O, ICl <sub>2</sub> <sup>+</sup>	
	1	3		linear	HF, OH <sup>-</sup>	
5	5	0	trigonal bipyramidal	trigonal bipyramidal	PF <sub>5</sub>	
	4	1		seesaw	SF <sub>4</sub> , TeCl <sub>4</sub> , IF <sub>4</sub> <sup>+</sup>	
	3	2		T-shaped	ClF <sub>3</sub>	

	2	3		linear	$I_3^-$ , $XeF_2$	
6	6	0	octahedral	octahedral	$SF_6$ , $PF_6^-$ , $SiF_6^{2-}$	
	5	1		square pyramidal	$BrF_5$ , $SbCl_5^{2-}$	
	4	2		square planar	$XeF_4$ , $ICl_4^-$	