

Revised August 2010



HONORS WORKSHEET 9a: ANSWERS



Molecule	Lewis Structure (Clearly show <u>all</u> electron pairs)	Number of Bonding Pairs around <u>central</u> atom (Count multiple bonds as ONE pair)	Number of Lone Pairs around <u>central</u> atom	3D Sketch	Name of shape in terms of <u>atoms</u>	Type e.g. AB ₃ E
SiH ₄	Central Si with BP and LP as to the right →	4	0		Tetrahedral	AB ₄
ClBr ₃	Central Cl with BP and LP as to the right →	3	2		T-Shaped	AB ₃ E ₂
H ₂ S	Central S with BP and LP as to the right →	2	2		Bent	AB ₂ E ₂
PCl ₄ ⁺	Central P with BP and LP as to the right → (square brackets with charge)	4	0		Tetrahedral	AB ₄
H ₂	H single bonded to H	N/A – no central atom as such	N/A – no central atom as such		Linear	A ₂
SO ₃ ²⁻	Central S with BP and LP as to the right → (square brackets with charge)	3	1		Trigonal Pyramid	AB ₃ E



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IF ₅	Central I with BP and LP as to the right →	5	1		Square Pyramid	AB ₅ E
SCl ₆	Central S with BP and LP as to the right →	6	0		Octahedral	AB ₆
XeF ₄	Central Xe with BP and LP as to the right →	4	2		Square Planar	AB ₄ E ₂
PH ₃	Central P with BP and LP as to the right →	3	1		Trigonal Pyramid	AB ₃ E
PBr ₅	Central P with BP and LP as to the right →	5	0		Trigonal Bipyramid	AB ₅
PF ₃	Central P with BP and LP as to the right →	3	1		Trigonal Pyramid	AB ₃ E