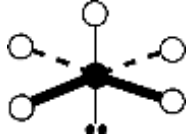
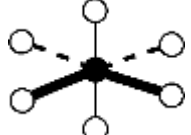


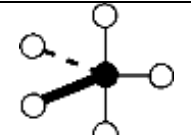
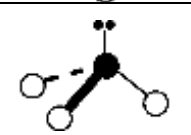


AP WORKSHEET 02EG: ANSWERS

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	Hybridization around central atom	Name of shape in terms of <u>atoms</u>
SiH ₄	Central Si with BP and LP as to the right →	4	0		sp ³	Tetrahedral
BeF ₂ (Electron Deficient Be)	Central Be with BP and LP as to the right →	2	0		sp	Linear
H ₂ S	Central S with BP and LP as to the right →	2	2		sp ³	Bent
PCl ₄ ⁺	Central P with BP and LP as to the right → (square brackets with charge)	4	0		sp ³	Tetrahedral
H ₂	H single bonded to H	N/A – no central atom as such	N/A – no central atom as such		N/A	Linear
SO ₃ ²⁻	Central S with BP and LP as to the right → (square brackets with charge)	3	1		sp ³	Trigonal Pyramid

Molecule	Lewis Structure (Clearly show all 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	Hybridization around central atom	Name of shape in terms of <u>atoms</u>
IF ₅	Central I with BP and LP as to the right →	5	1		N/A	Square Pyramid
SCl ₆	Central S with BP and LP as to the right →	6	0		N/A	Octahedral
XeF ₄	Central Xe with BP and LP as to the right →	4	2		N/A	Square Planar
PH ₃	Central P with BP and LP as to the right →	3	1		sp ³	Trigonal Pyramid
PBr ₅	Central P with BP and LP as to the right →	5	0		N/A	Trigonal Bipyramid
PF ₃	Central P with BP and LP as to the right →	3	1		sp ³	Trigonal Pyramid