

Revised August 2011



HONORS WORKSHEET 9a: Lewis Structures & Shapes



| 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 | | | | | | |
| ClBr ₃ | | | | | | |
| H ₂ S | | | | | | |
| PCl ₄ ⁺ | | | | | | |
| H ₂ | | N/A – no central atom as such | N/A – no central atom as such | | | |
| SO ₃ ²⁻ | | | | | | |



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|------------------|---|---|---|-----------|---|--------------------------------|
| IF ₅ | | | | | | |
| SCl ₆ | | | | | | |
| XeF ₄ | | | | | | |
| PH ₃ | | | | | | |
| PBr ₅ | | | | | | |
| PF ₃ | | | | | | |