

Name_

Laboratory Report

Data Table A.

| Name and Shape | Molecular Formula | Valence Electrons | Lewis Structure |
|-------------------|-------------------------------|----------------------|-----------------|
| Boron Trichloride | | | |
| | | | |
| | | | |
| Methane | | | |
| | | | |
| | | | |
| Ethylene | | | |
| | C ₂ H ₄ | | |
| | | | |
| Ammonia | | | |
| | | | |
| | | | |
| Ammonium Ion | | | |
| | | | |
| Hydrogen Sulfide | | | |
| | | | |
| | | | |
| | | | |

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| Name and Shape | Molecular Formula | Valence Electrons | Lewis Structure |
|------------------------|----------------------|----------------------|-----------------|
| Sulfur Trioxide | | | |
| | | | |
| | | | |
| | | | |
| Acetylene | | | |
| | C_2H_2 | | |
| | | | |
| Phosphorus Trichloride | | | |
| | | | |
| | | | |
| | | | |
| Carbon Tetrachloride | | | |
| | | | |
| | | | |
| Iodine Pentafluoride | | | |
| | | | |
| | | | |
| • | | | |
| Carbonate Ion | | | |
| | | | |
| | | | |
| Thiocyanate Ion | | | |
| | | | |
| | SCN- | | |
| | | | |

| Name and Shape | Molecular Formula | Valence Electrons | Lewis Structure |
|-----------------------|----------------------|----------------------|-----------------|
| Carbon Disulfide | | | |
| | | | |
| | | | |
| | | | |
| Formaldehyde | | | |
| | H ₂ CO | | |
| | | | |
| Sulfate Ion | | | |
| | | | |
| | | | |
| | | | |
| Arsenic Pentafluoride | | | |
| | | | |
| | | | |
| Hydrogen Cyanide | | | |
| Tryurogen Cyannue | | | |
| •—• | | | |
| | | | |
| Sulfur Hexafluoride | | | |
| | | | |
| | | | |
| | | | |
| Xenon Tetrafluoride | | | |
| | | | |
| | | | |
| | | | |

| Model | Bonding Pairs*† | Unshared Pairs* | Total [†] | Sketch and Molecular Geometry |
|-------|--------------------|--------------------|--------------------|-------------------------------|
| Α | | | | |
| В | | | | |
| С | | | | |
| D | | | | |
| E | | | | |
| F | | | | |
| G | | | | |
| Н | | | | |
| I | | | | |
| J | | | | |
| K | | | | |

Data Table B. Molecular Geometry

*Count the bonding and nonbonding pairs of electrons around the central atom only. [†]In the case of double or triple bonds, count all of the electrons involved in the bond as one group or pair of electrons.

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