

Name: _____

Date: _____

Post-laboratory Questions:

1. Complete the following table (Hint: Drawing the Lewis structures for these molecules after obtaining the total valence electrons will help you to complete the table).

Molecule	Total Valence Electrons in Molecule	Total Electron Domains around Central Atom	Electron-Domain Shape (Geometry)	No. of Bonding Domains around Central Atom	Number of Nonbonding Domains around Central Atom	VSEPR Class	Molecular Shape (Geometry)	Polar? Y/N
HCN								
BH ₃								
SnCl ₂								
NH ₄ ⁺								
H ₃ O ⁺								
NO ₂								
SbF ₅								
SeF ₄								
BrF ₃								
XeF ₂								
SeF ₆								
IF ₅								
XeF ₄								

2. Draw a possible Lewis structure for the IF₇ molecule. List a possible name for the shape of this molecule (Hint: Consider what this molecule would look like in three-dimensions. As you have seen in this lab, consider how the three-dimensional appearance of the molecule is related to its shape name.)