

Section 6.4 Complete the following table in your class notebook with the heading: Molecular Geometry

Valence e- Total	Lewis Dot Structure	Molecular Shape & Bond Angle	Name of Shape	Molecular Polarity
PCl <sub>3</sub> <u>126</u>	$\begin{array}{c} \text{:}\ddot{\text{Cl}}\text{:} - \ddot{\text{P}} - \text{:}\ddot{\text{Cl}}\text{:} \\   \\ \text{:}\ddot{\text{Cl}}\text{:} \end{array}$		Pyramidal	polar
H <sub>2</sub> S <u>18</u>				
CBr <sub>4</sub> <u>132</u>	$\begin{array}{c} \text{:}\ddot{\text{Br}}\text{:} \\   \\ \text{:}\ddot{\text{Br}} - \text{C} - \text{:}\ddot{\text{Br}}\text{:} \\   \\ \text{:}\ddot{\text{Br}}\text{:} \end{array}$		Tetrahedral	Nonpolar
BrCN <u>116</u>				
SO <sub>3</sub> <sup>2-</sup> <u>126</u>	$\left[ \begin{array}{c} \text{:}\ddot{\text{O}}\text{:} - \ddot{\text{S}} - \text{:}\ddot{\text{O}}\text{:} \\   \\ \text{:}\ddot{\text{O}}\text{:} \end{array} \right]^{2-}$		Pyramidal	polar
C <sub>2</sub> F <sub>2</sub> <u>122</u>				
C <sub>2</sub> H <sub>4</sub> <u>124</u>	$\begin{array}{c} \text{H} & \text{H} \\ & \backslash / \\ & \text{C} = \text{C} \\ & / \backslash \\ \text{H} & \text{H} \end{array}$		Trigonal planar	Nonpolar

(over)

Valence e- Total	Lewis Dot Structure	Molecular Shape & Bond Angle	Name of Shape	Molecular Polarity
BF <sub>3</sub> [24]				
OF <sub>2</sub> [20]			Bent	polar
O <sub>3</sub> [18]				
NO <sup>+</sup> [10]			Linear	polar
PO <sub>3</sub> <sup>-</sup> [24]				
H <sub>2</sub> SO <sub>4</sub> [32]			<sup>S</sup> Tetrahedral Bent	polar
H <sub>2</sub> CO <sub>3</sub> [24]				
HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub> [24]				