
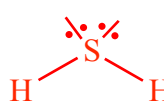
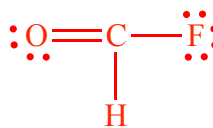
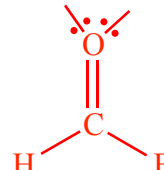
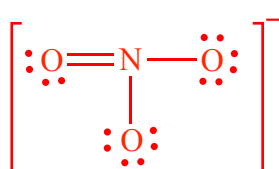
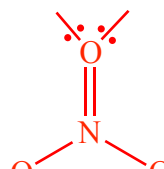
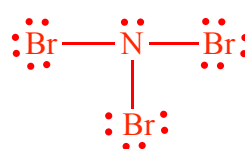
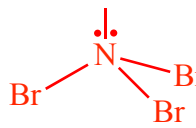
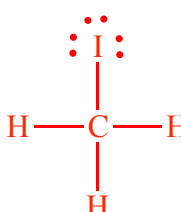
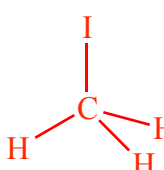
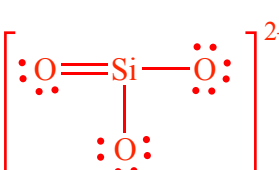
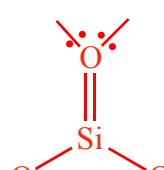


WKS: Additional
Lewis Structures-VSEPR

NAME Answer Key
Period _____ Date _____

Determine the number of valence electrons and draw the Lewis structures for the following molecules or polyatomic ions. Determine the Electron & Molecular Geometries using VSEPR, then draw the 3D structure. Lewis structures must contain ALL valence electrons, but the 3D drawing does not need the lone pairs on single-bonded terminal atoms.

Formula & # val. e ⁻	Lewis Structure (Show ALL electrons)	Electron & Molecular Geometries	3D Drawing (Omit lone pairs on single-bonded terminal atoms)	Bond Angle
1. H ₂ S 8 e ⁻		Tetrahedral Bent		<109.5°
2. CHFO (C is central) 18 e ⁻		Trigonal Planar Trigonal Planar		120°
3. NO ₃ ⁻ 24 e ⁻		Trigonal Planar Trigonal Planar		120°
4. NBr ₃ 26 e ⁻		Tetrahedral Trigonal Pyramidal		<109.5°
5. CH ₃ I 14 e ⁻		Tetrahedral Tetrahedral		109.5°
6. SiO ₃ ²⁻ 24 e ⁻		Trigonal Planar Trigonal Planar		120°

Formula & # val. e ⁻	Lewis Structure (Show ALL electrons)	Electron & Molecular Geometries	3D Drawing (Omit lone pairs on single-bonded terminal atoms)	Bond Angle
7. N ₂ O (Arranged N-N-O) 16 e ⁻		Linear Linear		180°
8. SiO 10 e ⁻		Linear Linear		180°
9. BeF ₂ * 16 e ⁻		Linear Linear		180°
10. BCl ₃ * 26 e ⁻		Trigonal Planar Trigonal Planar		120°
11. SO ₃ ²⁻ 26 e ⁻		Tetrahedral Trigonal Planar		<109.5°
12. ClNO (Cl-N-O) 18 e ⁻		Trigonal Planar Bent		<120°
13. SCO (C central) 16 e ⁻		Linear Linear		180°

*B & Be are exceptions to the Octet Rule: they can be “satisfied” with fewer electrons.