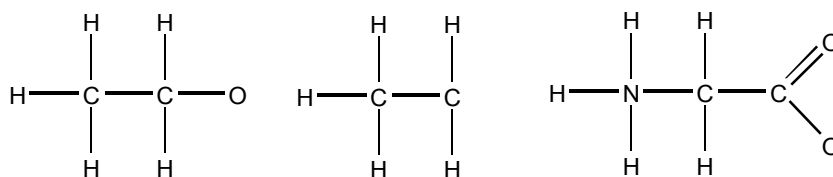


- How many electrons are in the valence shell of each atom?
 - Carbon
 - Nitrogen
 - Chlorine
 - Aluminum
- Which type of bond does each of these compounds contain?
 - LiF
 - CH₃F
 - MgCl₂
 - HCl
- Draw Lewis structures for these ions. Show all valence electrons and formal charges.
 - NH₂⁻
 - HCO₃⁻
 - CO₃²⁻
 - NO₃⁻
 - HCOO⁻
 - CH₃COO⁻
- Complete the molecules below to follow the octet rule. Assign formal charges.



- Draw 3D representations for each molecule. Which ones have a dipole moment and in which direction is it pointing?
 - CH₃F
 - CH₂Cl₂
 - CCl₄
 - CH₂CHCl
 - CH₃CN
 - (CH₃)₂CO
 - BrCHCHBr
- Give the orbital hybridization of each atom (not H).

