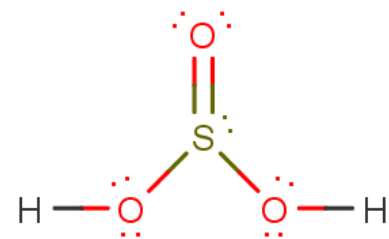
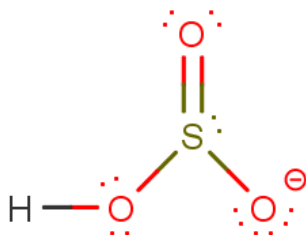
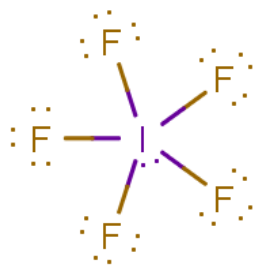
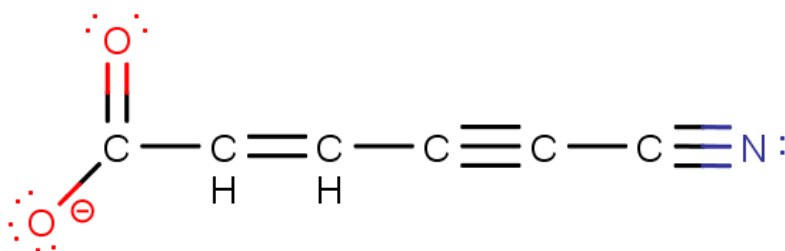
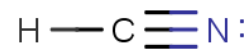
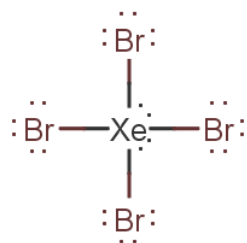
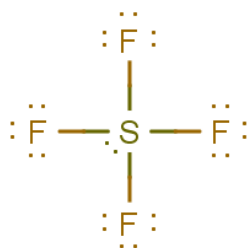
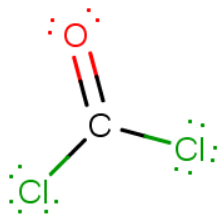


Hybridization and bonding

Assign hybridization to every atom in the following molecules:



Determine the electron geometry for each of the following hybridizations:

sp sp² sp³ sp³d sp³d²

How many sigma bonds and how many pi bonds exist in each of the following:

Bond Order	Sigma bonds	Pi bonds
1		
2		
3		

Sketch the bond that forms between the two fluorine atoms in F₂. Label all sigma and pi bonds.

Sketch the bond that forms between the two oxygen atoms in O₂. Label all sigma and pi bonds.

Using hybridization theory, sketch an energy diagram for the bond that forms between carbon and oxygen atoms in:

CO

H₂CO



Carbon



Oxygen



Carbon



Oxygen