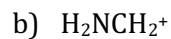
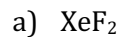


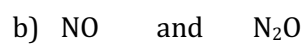
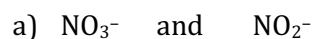
1. Draw Lewis structures of the following and indicate the formal charge on each atom:



2. There are multiple compounds with the molecular formula  $\text{C}_2\text{H}_3\text{SN}$  that differ in the arrangement of atoms. Draw Lewis structure for the valid arrangements of these atoms and indicate the formal charge on each atom in each structure.

Compare your structure to those of other students around you.

3. Circle the molecule or ion in each the following pairs with the longer N—O bond length:



4. Write and balance the chemical equation for the combustion of propene ( $C_3H_6$ ).

Given the table of bond enthalpies below, estimate the enthalpy of reaction.

Bond	Bond Enthalpy (kJ/mol)
C – C	348
C = C	614
C – H	413
C = O	799
H – H	436
O = O	495
O – H	463

5. Draw the resonance structures for the  $N(NO_2)_2^-$  ion and indicate the formal charge on each atom in each structure.