Lewis Structure

(10) 3. Draw a possible Lewis electron-dot structure for each of the ions below. Include resonance structures if they are needed to adequately represent the bonding in the molecule.

a) ClO_3^-

b) NCS^-

c) HSO_4^-

(20) 4. Complete the following table. Do not provide answers for grayed cells.

Formula	# bonding domains (CA)	# lone pairs domains (CA)	Molecular Geometry	Hybridization (CA)	Bond Angle(s)	Polar or Nonpolar
HCN						
CH_2Cl_2						
Cl_2CO						
H_3O^+						
XeF_2						

(4) 5. Indicate the atomic and/or hybrid orbitals that are required to form all of the bonds in Cl_2CO.

(4) 6. Explain why the bond angle in SO_2 is not 120˚.

(12) 3. Draw a possible Lewis electron-dot structure for each of the covalent molecules below. Include all resonance structures if they are needed to adequately represent the bonding in the molecule.

a) CF_2Br_2

b) CH_4S

c) HCO_3^-

(22) 4. Complete the following table. Do not provide answers for grayed cells.

Formula	# bonding domains (CA)	# lone pairs domains (CA)	Molecular Geometry	Hybridization (CA)	Bond Angle(s)	Polar or Nonpolar
ONF						
PF_3						
BrF_3						
NO_2^+						

(4) 5. Indicate the atomic and/or hybrid orbitals that are required to form all of the bonds in NO_2^+.

(6) 6. Explain why the bond angle in H_2O is not 109.5˚.