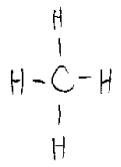
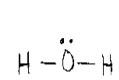
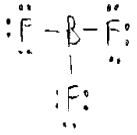
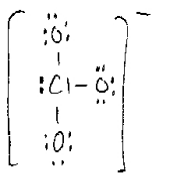
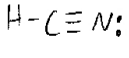
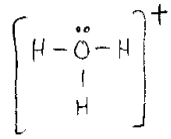
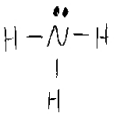
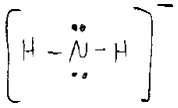
Lewis Structure - Answers

Formula	Lewis Structure	Molecular Geometry	Formula	Lewis Structure	Molecular Geometry
1. CH_4 Val. e^- = 4 + 4(1) = 8 e^- tot e^- = 8 + 4(2) = 16 e^- # bonds = $\frac{1}{2}$(16-8) = 4 bonds		tetrahedral non polar	**5. H_2O** Val. e^- = 2(1)+6 = 8 e^- tot. e^- = 2(2)+8 = 12 e^- # bonds = $\frac{1}{2}$(4-8) = 2 bonds		bent polar
2. BF_3 Val. e^- = 3+3(7) = 24 e^- violates octet Rule		trigonal planar non polar	**6. ClO_3^-** **Cl = Chlorine** Val. e^- = 7+3(6)+1 = 26 e^- tot. e^- = 8+3(8) = 32 e^- # bonds = $\frac{1}{2}$(32-26) = 3 bonds		trigonal pyramidal polar
3. HCN Val. e^- = 1+4+5 = 10 e^- tot. e^- = 2+8+8 = 18 e^- # bonds = $\frac{1}{2}$(18-10) = 4 bonds		linear polar	**7. H_3O^+** Val. e^- = 3(1)+6-1 = 8 e^- tot. e^- = 3(2)+8 = 14 e^- # bonds = $\frac{1}{2}$(14-8) = 3 bonds		trigonal pyramidal polar
4. NH_3 Val. e^- = 5+3(1) = 8 e^- tot. e^- = 8+3(2) = 14 e^- # bonds = $\frac{1}{2}$(14-8) = 3 bonds		trigonal pyramidal polar	**8. NH_2^-** Val. e^- = 5-2(1)+1 = 8 e^- tot. e^- = 8+2(2) = 12 e^- # bonds = $\frac{1}{2}$(12-8) = 2 bonds		bent polar