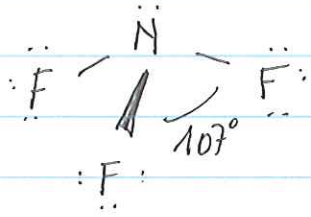


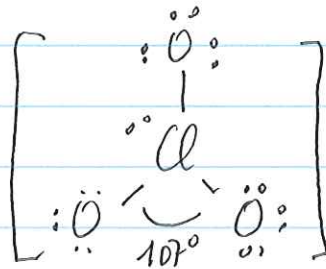
Shapes (p12 topic 4 handout)

a) NF_3 (26)

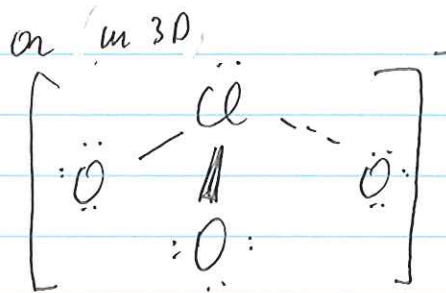


geometry: tetrahedral
 shape: trigonal pyramidal
 angles: 107°
 (FNF)

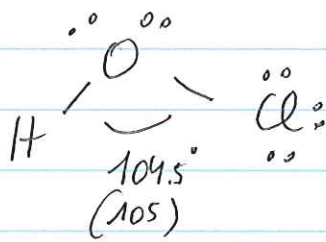
b) ClO_3^- (26)



geometry: tetrahedral
 shape: trigonal pyramidal
 angles: 107°

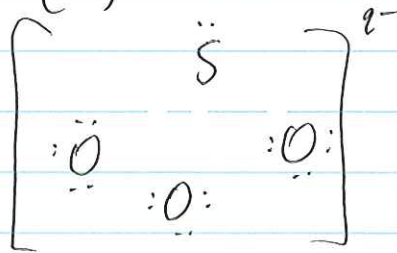


c) HOCl (14)



geometry = tetrahedral
 shape = bent
 angle $\text{HOCl} = 105^\circ$

d) SO_3^{2-} (26)

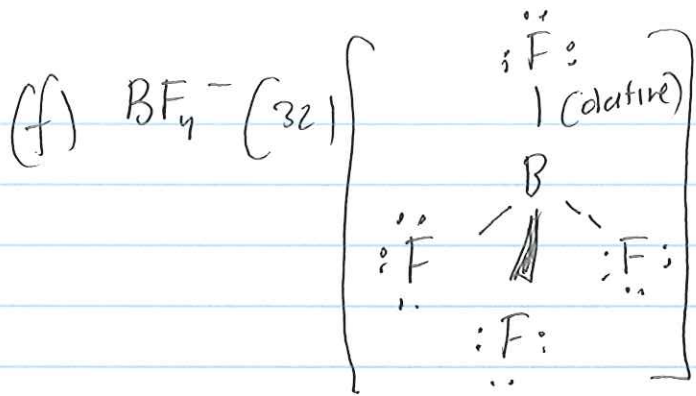


(expanded valence 10 of S)
 geometry = tetrahedral
 shape = trigonal pyramidal
 angle $\text{OSO} = 105^\circ$

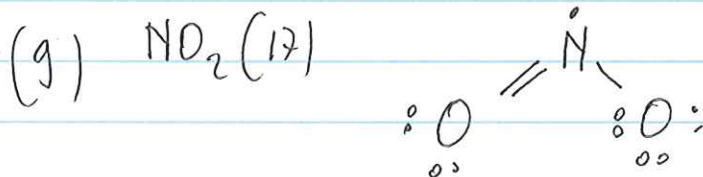
e) Cl_2O (20)



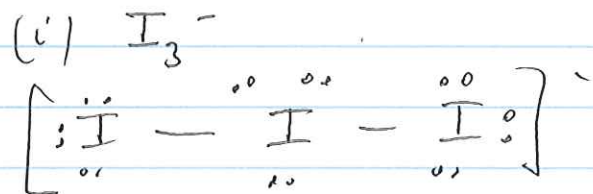
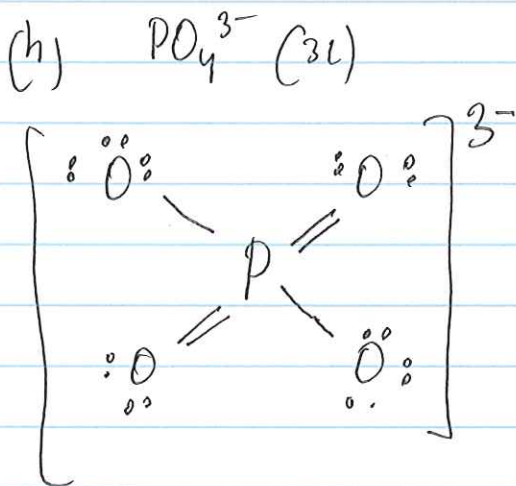
tetrahedral, bent, 105°



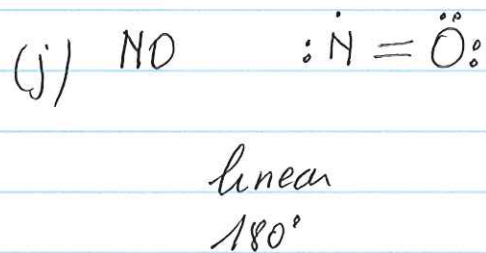
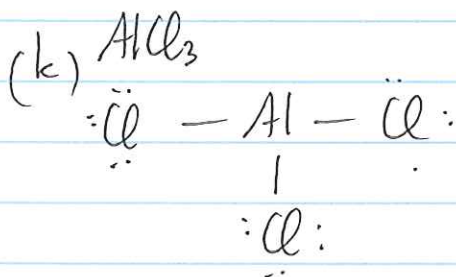
tetrahedral (geometry)
tetrahedral
 109°



trigonal planar (geometry)
bent (shape)
 134°



trigonal bipyramidal
linear
 180°



linear
 180°

trigonal planar
trigonal planar
 120°