

Worksheet 6

1. Draw Lewis structures for each of the following molecules or ions **a)** PF_3 , **b)** CH_3^+ **c)** BrF_3 , **d)** ClO_4^- **e)** XeF_2 .
2. **a)** What conditions must be met if a molecule with polar bonds is non-polar? **b)** What geometries will give non-polar molecules for AB_2 , AB_3 , and AB_4 geometries?
3. Predict the Lewis dot structures of C_2H_4 and C_2H_2 .
4. PCl_5 exists but NCl_5 does not. Explain.
5. **a)** Sketch a σ bond that is constructed from p orbitals. **b)** Sketch a π bond that is constructed from p orbitals