1. Show the formation of the ionic compounds NaCl, CaF₂, and Li₂S using Lewis Dot Symbols.

2. Rank in order of lowest to highest lattice energy the following four compounds: MgO, KCl, Na₂S, and BaS.

3. Show the Lewis Structures for: CF₄, NBr₃, H₂O, CO₂, SF₄, IF₅, and ClO₃⁻

4. Describe the following bonds are either non-polar covalent, polar covalent, or ionic.
   a. K – Cl
   b. N – Cl
   c. C – Cl
5. Show all resonance structures for: SO₂, NO₃⁻, C₆H₆.

6. Determine ΔH for each reaction using Lewis structures. Note: b and c are SKELETON structures only!
   a. CH₄ + Cl₂ → CH₃Cl + HCl

   b. H – C – C – H + H – Cl → H – C – C – H
      \[ \text{H} \quad \text{Cl} \]
      \[ \text{H} \quad \text{H} \]

   c. 2 H – C – C – H + 5 O₂ → 4 O – C – O + 2 H – O – H