# Open Chemistry Online – Post Quiz #13 (OpenStax Ch: 7.1 - 7.4)

1. Propose Lewis diagrams for the following compounds: C2H4, C2H6
2. Both structures proposed above contain a carbon-carbon bond. Which of the structures above do you expect will contain the carbon-carbon bond with a greater bond energy? Explain why.

Diagram

Description automatically generated

1. Consider the following two resonance structures for nitrate (NO3-). Label all atoms with their formal charge and circle the major resonance structure. Explain why you chose this structure for full credit.
2. Does nitrate have any equivalent major resonance structures? Draw all relevant major resonance structures (including the one chosen in C) and explain how these structures contribute to nitrate’s true structure.

**Ex. Credit: What is the bond order of each N-O bond in nitrate?**