AP Chemistry Daily Videos
2.6 Resonance and Formal Charge

Video #1

1. Pause the video at :30 and attempt the problem, then evaluate how you did and identify any errors.

- Draw the Lewis diagram for carbonate , CO_3^{2-}.

2. What do resonance structures show and how do you correctly depict a resonance structure? Make sure you include what the double arrows indict. Describe the bonds in a molecule with resonance.

3. Give an example of how to draw a hybrid resonance structure. Explain what the dotted line represents.

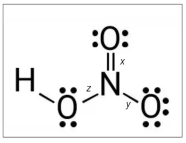
4. Pause the video at 3:20 and attempt the problem, then evaluate how you did and identify any errors.

It is your turn! Pause the video and attempt the Lewis diagram for formate ion HCO_2^{-1}. Hint: include all resonance structures if applicable

HCO_2^{-1}

5. Pause the video at 4:28 and attempt the problem, then evaluate how you did and identify any errors.

Nitric acid, HNO_3 is a common strong acid very corrosive when concentrated. The Lewis diagram of nitric acid is shown below, and the nitrogen-oxygen bonds labeled as x, y, and z. Which of the following is the correct comparison of length between these bonds?

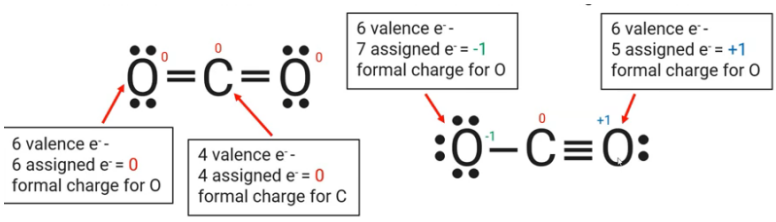


A. x = y = z
B. x < y = z
C. x = y < z
D. y = z < x

Video #2

1. What is formal charge?

2. How do you assign a formal charge to an atom?



3. How do you use formal charge to determine the best Lewis structure?
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4. Pause the video at 4:44 and attempt the problem, then evaluate how you did and identify any errors.

Determine the formal charge for each atom in the possible Lewis diagrams for the thiocyanate ion and then decide which of the three structures is the dominant one