CHM 201 **Summary of Allowed Electron Movements in Resonance Forms**

* Only two types of electrons move when drawing a resonance form:
  + Electrons in pi-bonds of multiple bonds, and
  + Electrons that are lone pairs
* The following table summarizes the 3 ways these above electrons can move when drawing a resonance form:

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Structure and Movement** | **Movement Type** | **Requirements** |
| 1 |  | From a pi-bond to an adjacent bond | Atom Z must have a vacant p-orbital (less than a octet of electrons) or can become vacant by movement of pi-electrons from a multiple bond that Z is involved in. |
| 2 |  | From pi-bond to an atom involved in that pi-bond | Atom Y must be more electronegative than atom X for this movement to have any significance. |
| 3 |  | From a lone pair to an adjacent bond | Atom X must have a vacant p-orbital (less than a octet of electrons) or can become vacant by movement of pi-electrons from a multiple bond that X is involved in. |

* Any simultaneous combination of movements involving number 1 and 2, or 3 and 2 are allowed electron movements.