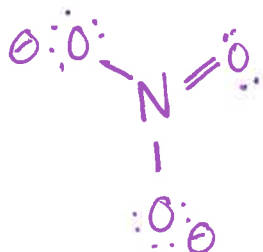


Key

Session 2: Resonance Structures and Hybrids

- 1) Determine the formal charge on nitrogen in Nitrate (NO_3^-).



$$\text{FC: } 5 - 0 - 4 = \boxed{+1}$$

- 2) What is the difference between the 3 types of lines when drawing stereochemistry?

(---) A dashed wedge projects behind the plane of the paper (fading away).

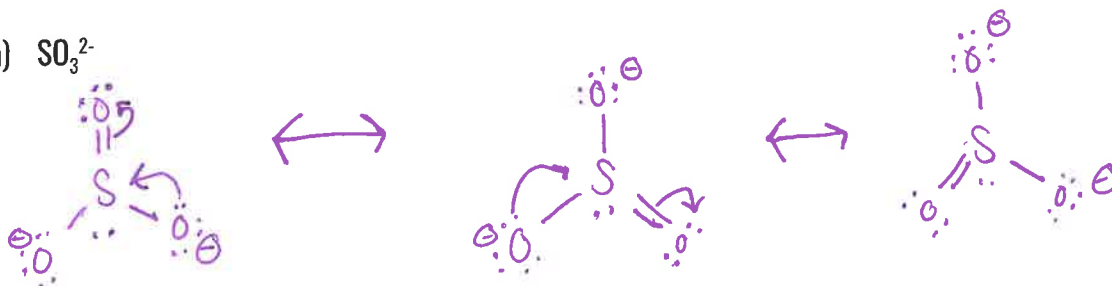
() A solid wedge projects in front of the plane of the paper (towards you).

(—) A solid line lies in the plane of the paper.

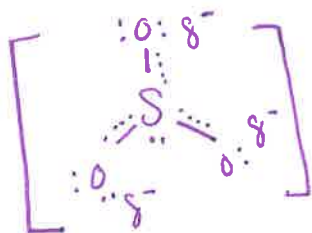
- 3) For the following compounds, determine the resonance structures and the resonance hybrid.

a) SO_3^{2-}

Resonance Structures:



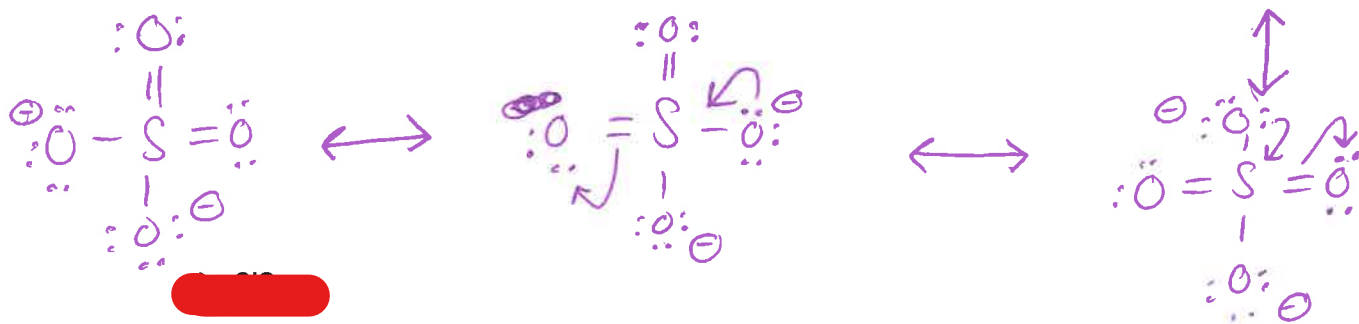
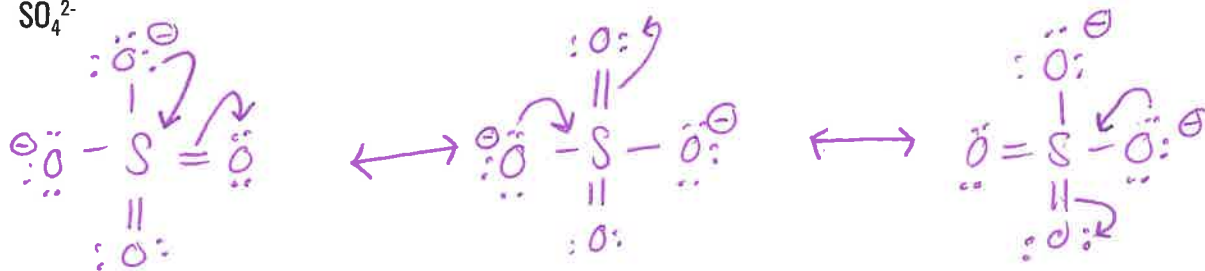
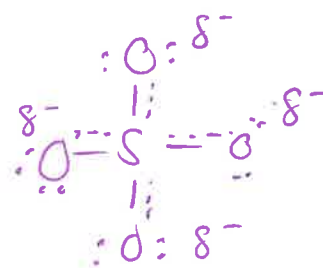
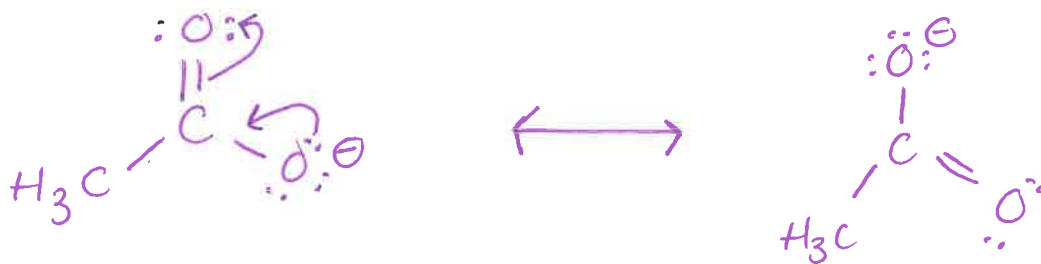
Resonance Hybrid:



b) SO_4^{2-}

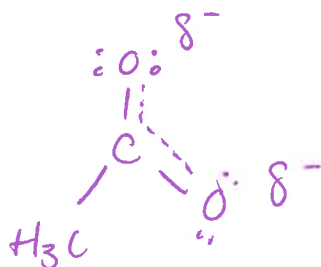
Resonance

Structures:

Resonance
Hybrid:d) CH_3CO_2^- Resonance
Structures:

Resonance

Hybrid:



4) In the following reactions, show the flow of electrons using curved arrows.

