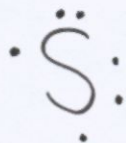


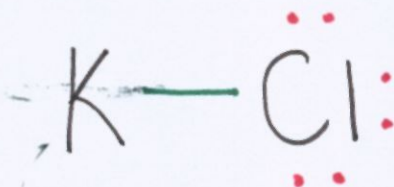
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Worksheet 2: Lewis Structures and Formal Charge

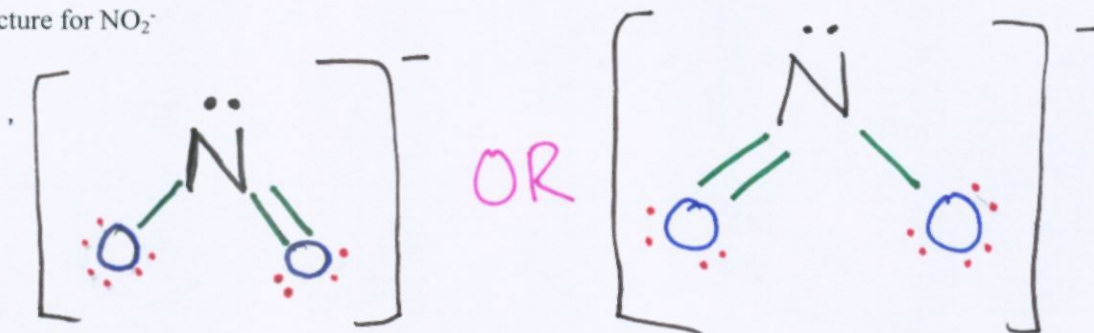
Draw the Lewis structure for Sulfur:



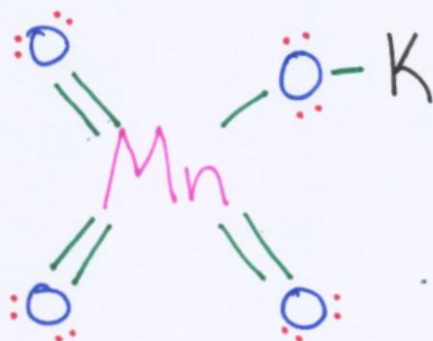
Draw the Lewis structure for KCl



Draw the Lewis structure for NO_2^-



Draw the Lewis structure for KMnO_4

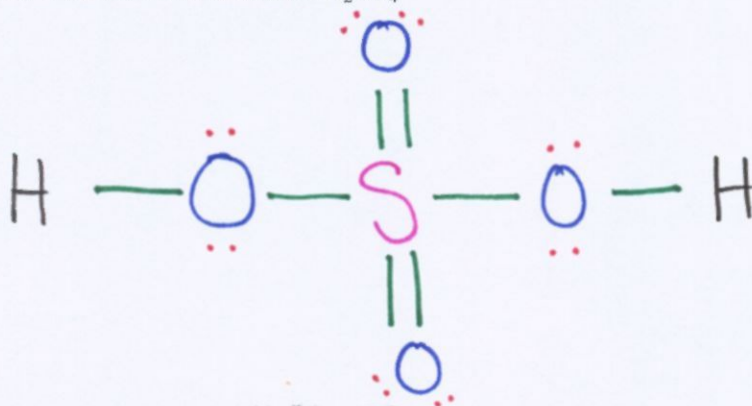


How do you know what atom should be the central atom of a compound?

The least electronegative atom
should be central atom.

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Draw the Lewis Structure of H_2SO_4



~~What is the formal charge of Iodine?~~

What is the formal charge of Nitrogen in NO_2^- ?

$$F = 5 - \frac{6}{2} - 2 = 0$$

What is the formal charge of the oxygen with a double bond in NO_2^- ?

$$F = 6 - \frac{4}{2} - 4 = 0$$

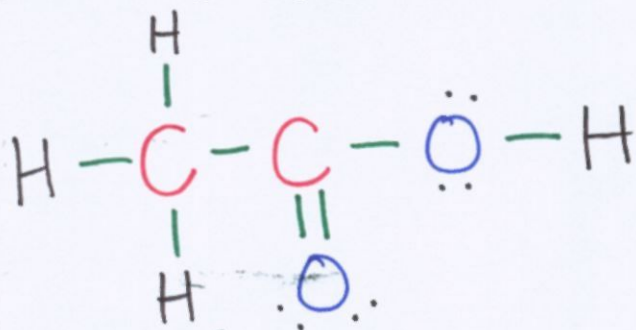
What is the formal charge of the oxygen with one bond in NO_2^- ?

$$F = 6 - \frac{2}{2} - 6 = -1$$

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Draw the Lewis structure for CH_3COOH and calculate the formal charge for Carbon, Oxygen and Hydrogen. Lastly, calculate the formal charge of the whole compound.

Lewis Structure



$$F \text{ of C} = 4 - \frac{8}{2} - 0 = 0$$

$$F \text{ of O} = 6 - \frac{4}{2} - 4 = 0$$

$$F \text{ of H} = 1 - \frac{2}{2} - 0 = 0$$

Total Formal charge: Formal charge of C + Formal charge of O

$$\text{Formal charge of H} = 0$$

$$\text{TFC} = 0 + 0 + 0 = 0$$