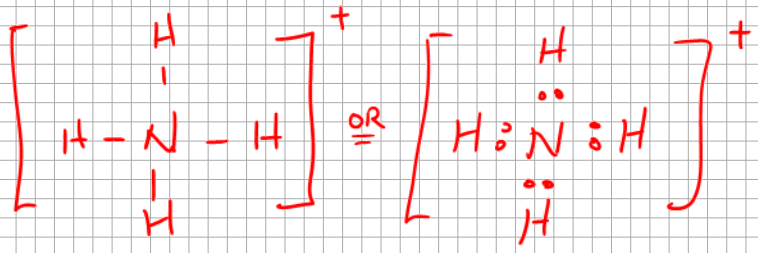
AMMONIUM CATION, NH_4^+

N $1s^2 2s^2 2p^3$ ⇒ 5 VALENCE e^-

4 (H $1s^1$ ⇒ 1 VALENCE e^-)

$9 - 1 = 8$ ELECTRONS

4 BONDS AND/OR L.P.



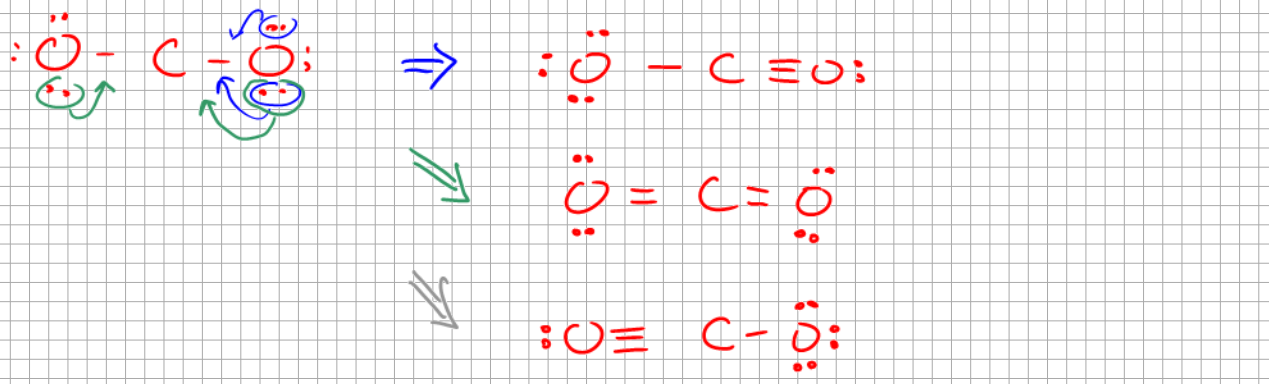
CARBON DIOXIDE, CO_2

C $1s^2 2s^2 2p^2$ ⇒ 4 VALENCE

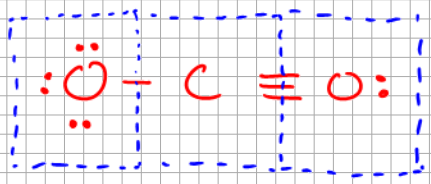
2 (O $1s^2 2s^2 2p^4$ ⇒ 6 VALENCE)

Σ 16 VALENCE e^-

8 BONDS AND/OR L.P.

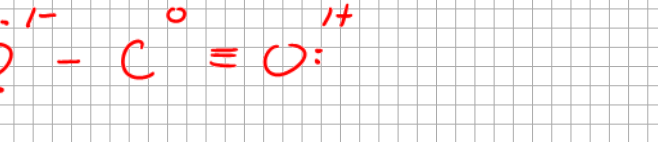


EVALUATING FORMAL CHARGE

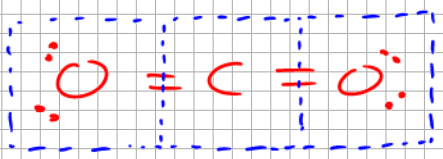


$$\text{FORMAL CHARGE} \equiv \#\text{ VALENCE ELECTRONS} - \left(\#e^- \text{ IN L.P} + \frac{\#e \text{ IN BONDS}}{2}\right)$$

VALENCE e^-	6	4	6
"ACTUAL" e^-	7	4	5
F.C.	-1	0	1



FORMAL CHARGE

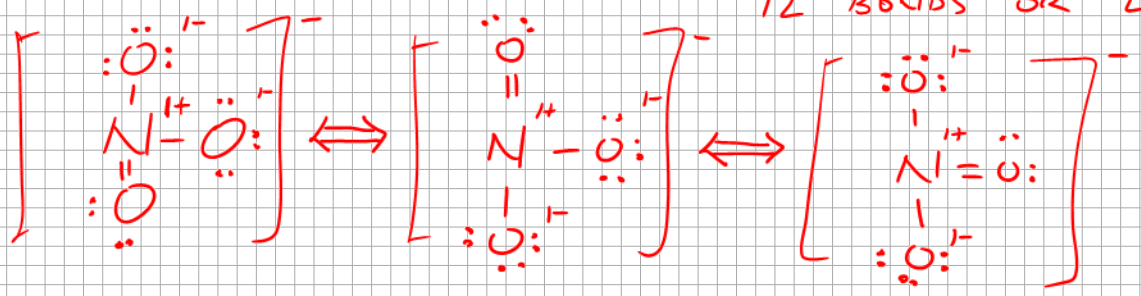


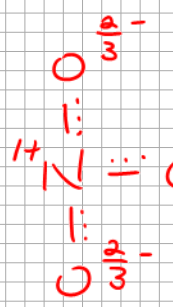
VALENCE e^-	6	4	6
"ACTUAL" e^-	6	4	6
F.C.	0	0	0

NITRATE, $[NO_3]^-$

24 TOTAL e^-

12 BONDS OR LONE PAIRS





"REALITY" IS $1\frac{1}{3}$ BONDS TO EACH OXYGEN