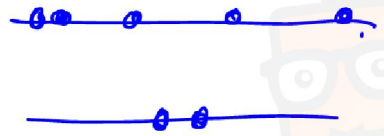


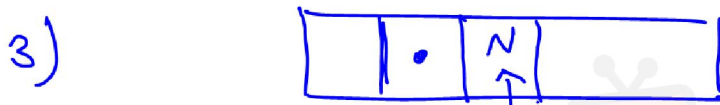
Chimie :

Exercice 1:

1) $(K)^2 (L)^5$



2) $Z = 7$; $A = 14$



$2^e P / 5^e C.$

a) $Z = 6.$

b) numero atomique.

↳ propre a chaque atome (identifie l'element chimique)

c) regle de l'octet : remplissage de la couche externe par $8e (L, 17).$

regle de l'octet : remplissage de la couche externe par $2e^-.$

d) X est C (le carbone).



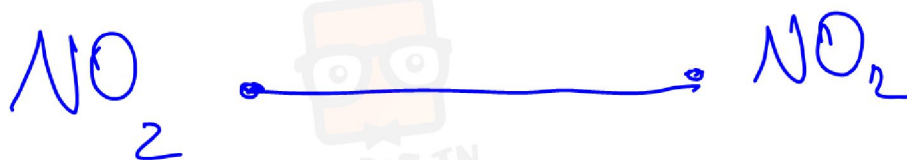
في دارك... انتهمون على قرابتة اصغارك

4) a) $\text{NO}_2 \Rightarrow$



b)

c) N_2O_4



في دارك... إتهنوخ على قرابتة إصغارك



Exercice 2:



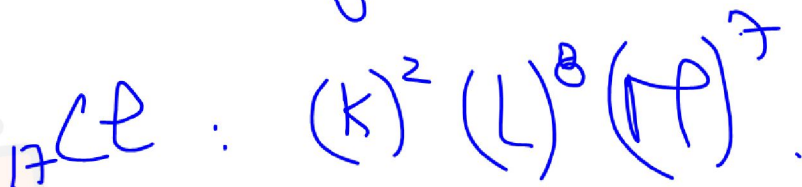
2 couches \Rightarrow ligne 2.

4 e⁻ de valence \Rightarrow colonne 4

C : 2^e ligne, 4^e colonne.



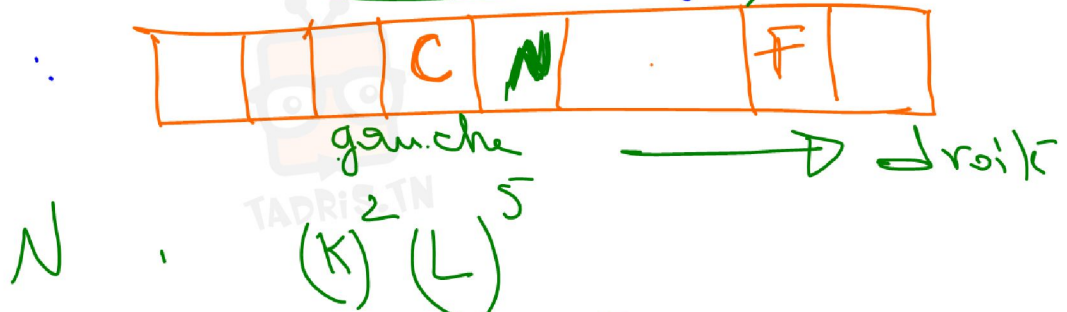
2^e ligne ; 7^e colonne.



3^e période ; 7^e colonne.

b) Cl, F \in halogène.

c) F est plus électroaffine que C.



F est \otimes \mathcal{K} que \mathbb{N} .

F est \otimes \mathcal{K} que \mathbb{C} .

\mathbb{N} est \otimes \mathcal{K} que \mathbb{C}

$$\mathcal{K}_{\mathbb{C}} \simeq \mathcal{K}_{\mathbb{N}}$$

$$\mathcal{K}_{\mathbb{C}} \subset \mathcal{K}_{\mathbb{F}}$$

$$\begin{array}{l} \mathcal{K}_{\mathbb{F}} \supset \mathcal{K}_{\mathbb{N}} \\ \mathcal{K}_{\mathbb{C}} \subset \mathcal{K}_{\mathbb{N}} \end{array}$$

$$\mathcal{K}_{\mathbb{F}} \supset \mathcal{K}_{\mathbb{N}} \supset \mathcal{K}_{\mathbb{C}}$$

$$\mathcal{K}_{\mathbb{F}} \supset \mathcal{K}_{\mathbb{C}} \supset \mathcal{K}_{\mathbb{C}}$$



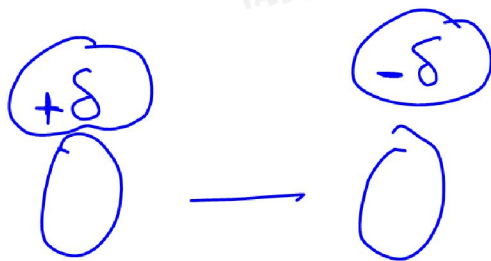
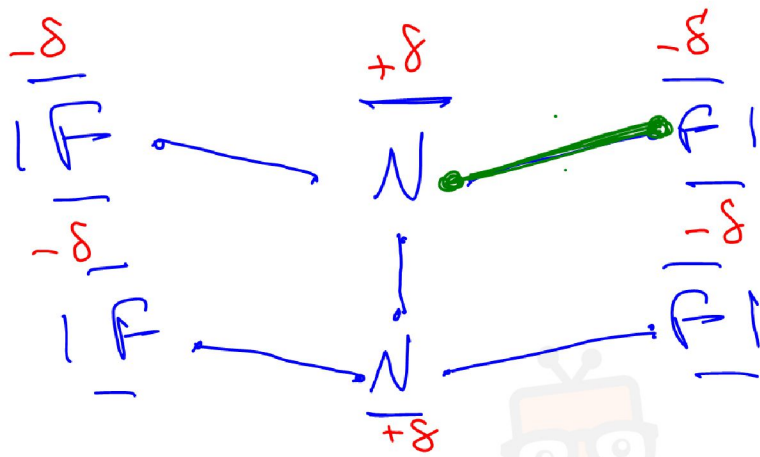
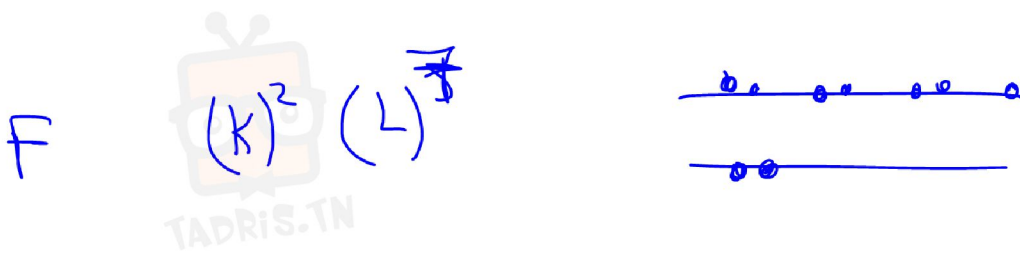
في دارك... انتخبون على قرابة اصغارك

\mathbb{N}

$(K)^2 (L)^5$

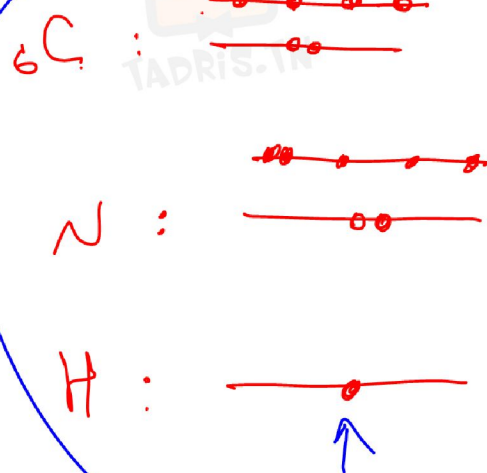
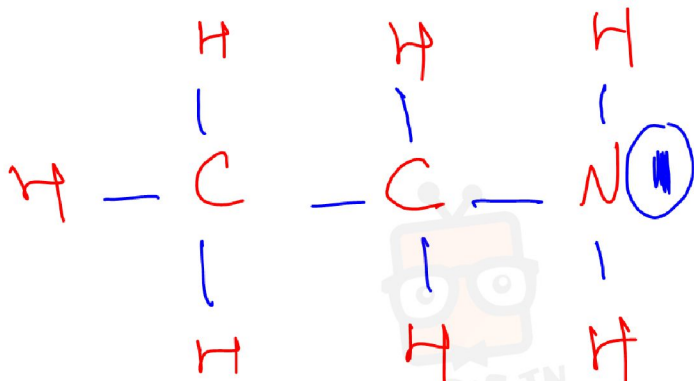
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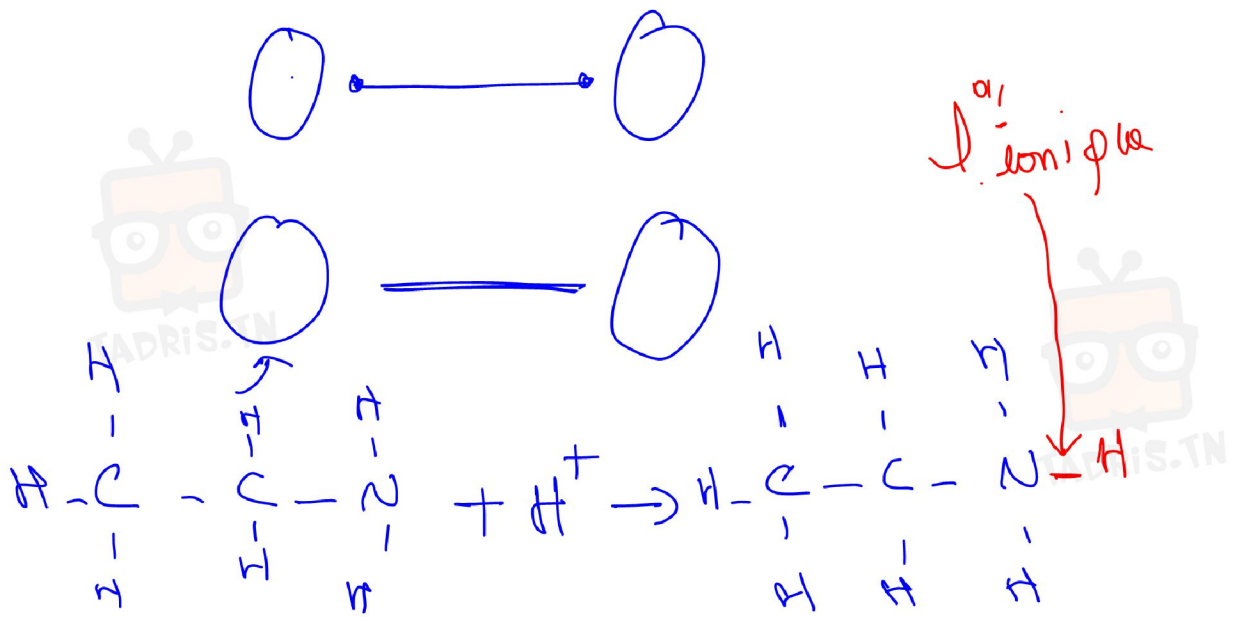


liaison covalente

③



في دارك... انتهمون على قرابتة اصغارك



la liaison ionique forme avec 2 e⁻ d'un m^{ême} elt
alors que la p^o covalente

resulte de 2 e⁻ ; resultant de 2 elt^s different^s.



Physique ?

① generation de tension

② loi des mailles: $U_G = U_R + U_C$
 $U_G = R \cdot I_1 + r' \cdot I_1$



في دارك... انتهمون على قرابتة اصغارك

$$U_{AB} = (R + r') I_1$$

$$r' = \frac{U_{AB}}{I_1} - R$$

$$r' = \frac{20}{1} - 15 = 5 \Omega$$

③ loi des mailles:

$$U_G = U_R + U_{r'}$$
$$U_G = R \cdot I_2 + (E' + r' I_2)$$

$$E' = U_G - R I_2 - r' I_2$$

$$E' = 20 - 15 \times 0,2 - 5 \times 0,2$$

$$E' = 16 \text{ V}$$

Generateur: $U = E' - r' \cdot I$

Recepteur actif: $U = E' + r' \cdot I$

$$P = U \cdot I = R I \cdot I = R \cdot I^2$$

④

$$I_3 = I_1 + I_2$$

$$U_{r'} = E' + r' \cdot I_1 = 16 + 5 \cdot I_1$$

$$U_{r'} = U_{AB} - U_R = 20 - 15 \cdot I_1$$



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$$16 + 5 \cdot I_1' = 20 - 15 \cdot I_1'$$

$$20 I_1' = 20 - 16 = 4.$$

$$I_1' = \frac{4}{20} = 0,2 \text{ A.}$$

b) في دمج التوازي $\Rightarrow I_3 = I_1' + I_2'$

$$I_2' = I_3 - I_1'$$

$$I_2' = 12 - 0,2 = 11,8 \text{ A.}$$

c) $U_2 = E_2' + r_2' I_2'$

$$E_2' = U_2 - r_2' I_2'$$

↓

UAB

$$\begin{aligned} E_2' &= 20 - 8 \times 11,8 \\ &= 12 \text{ V.} \end{aligned}$$



في دارك... إتهون على قرابتة إصغارك

d)



$$U = E' + r' \cdot I$$

$$P = \underbrace{E' \cdot I}_{P_n} + \underbrace{r' \cdot I^2}_{P_{in}}$$



$$P_n = P_{ch} = E'_2 \cdot I'_2 = 12 \times 1$$
$$= 12 \text{ W}$$



$$W_{in} = P_{in} \cdot \Delta t$$
$$= r \cdot I^2 \cdot \Delta t$$



$$U_G = U_E$$

$$\left\{ \begin{aligned} E - r \cdot I &= E'_2 + r'_2 \cdot I'_2 \end{aligned} \right.$$

$$\left\{ \begin{aligned} E - r \cdot I &= U_R + U_G = R \cdot I'_1 + E'_1 + r'_1 \cdot I'_1 \end{aligned} \right.$$

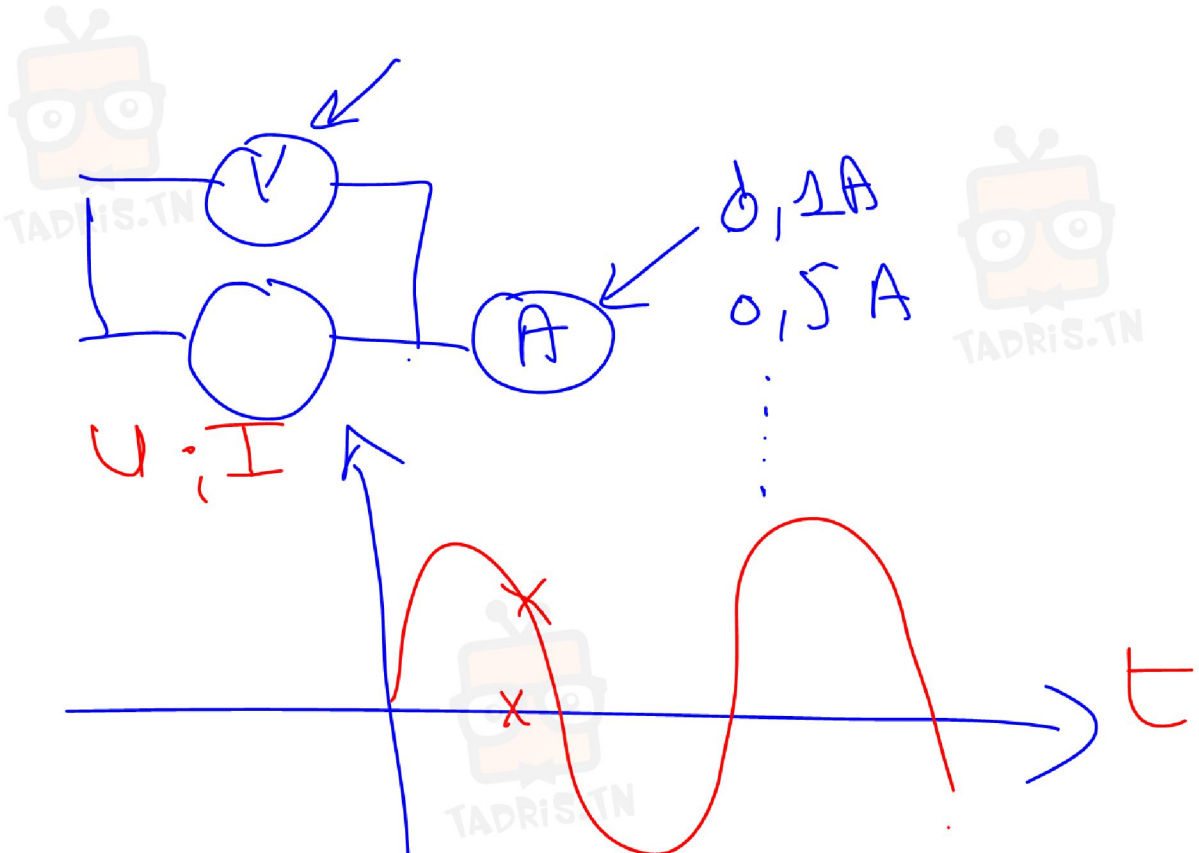


$$W_{in} = r \cdot \overbrace{I^2}^{1,2} \cdot \overbrace{\Delta t}^{(5 \times 60)}$$

$$\rightarrow J$$

$$P_u = \frac{E_1 \cdot I_1'}{P_t} = U_n \cdot I_1'$$

$$\xi_{IT} = \frac{P_u}{P_t} < 1$$



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