

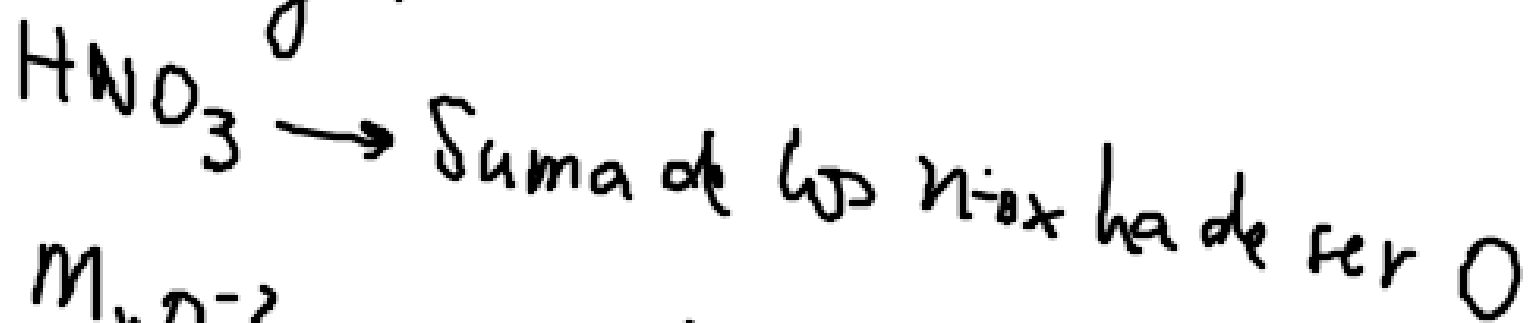
## Redox: Normas para calcular los números de oxidación

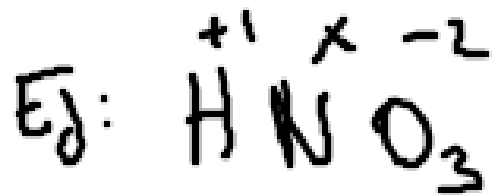
- 1- : N-ox de cualquier átomo libre es 0
- 2- : " del H es +1
- 3- : El n-ox del O es -2, excepto cuando está con el F

4- El n-ox de un ión, es el de su carga eléctrica

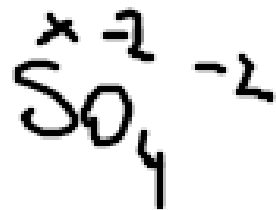
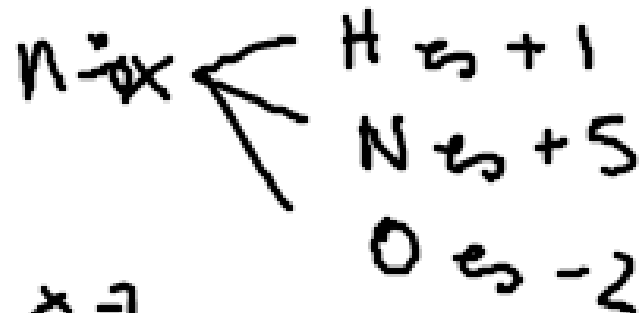


5- La suma algebraica de los n-ox de una molécula, ha de ser neutro o igual a su carga.

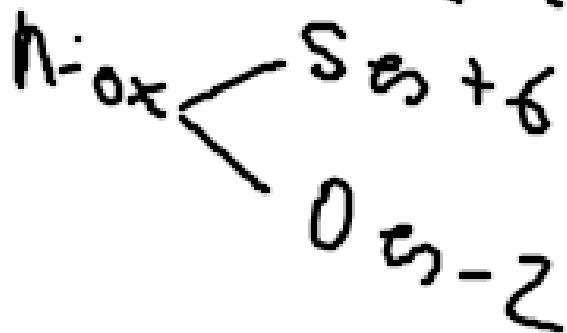


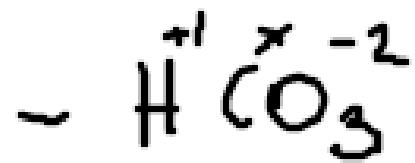


$$+1 + x - 6 = 0 \rightarrow x = 6 - 1 = 5$$

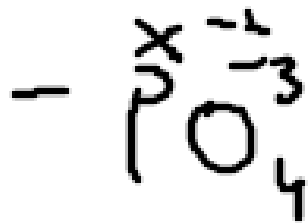
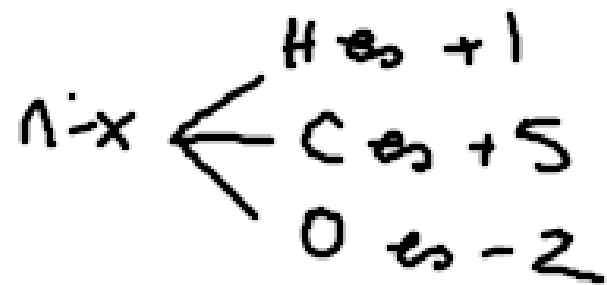


$$x - 8 = -2 \rightarrow x = 8 - 2 = 6$$

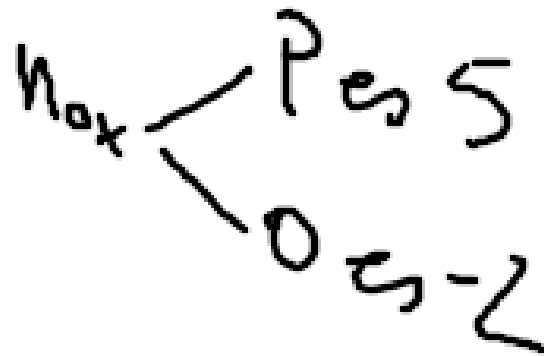


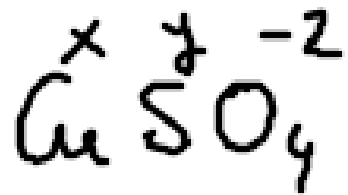


$$1+x-6=0 \rightarrow x=6-1=5$$



$$x-8=-3 \rightarrow x=-3+8=5$$





$$x + y - 8 = 0$$

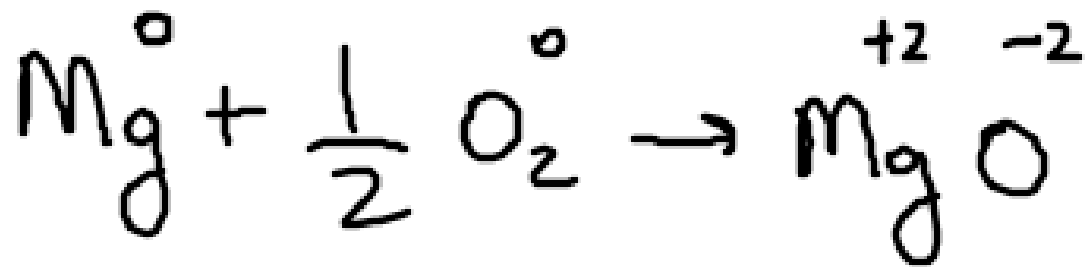
Pruebo  $y = -2$       $x - 2 - 8 = 0 \rightarrow x = 10$  No puede

||

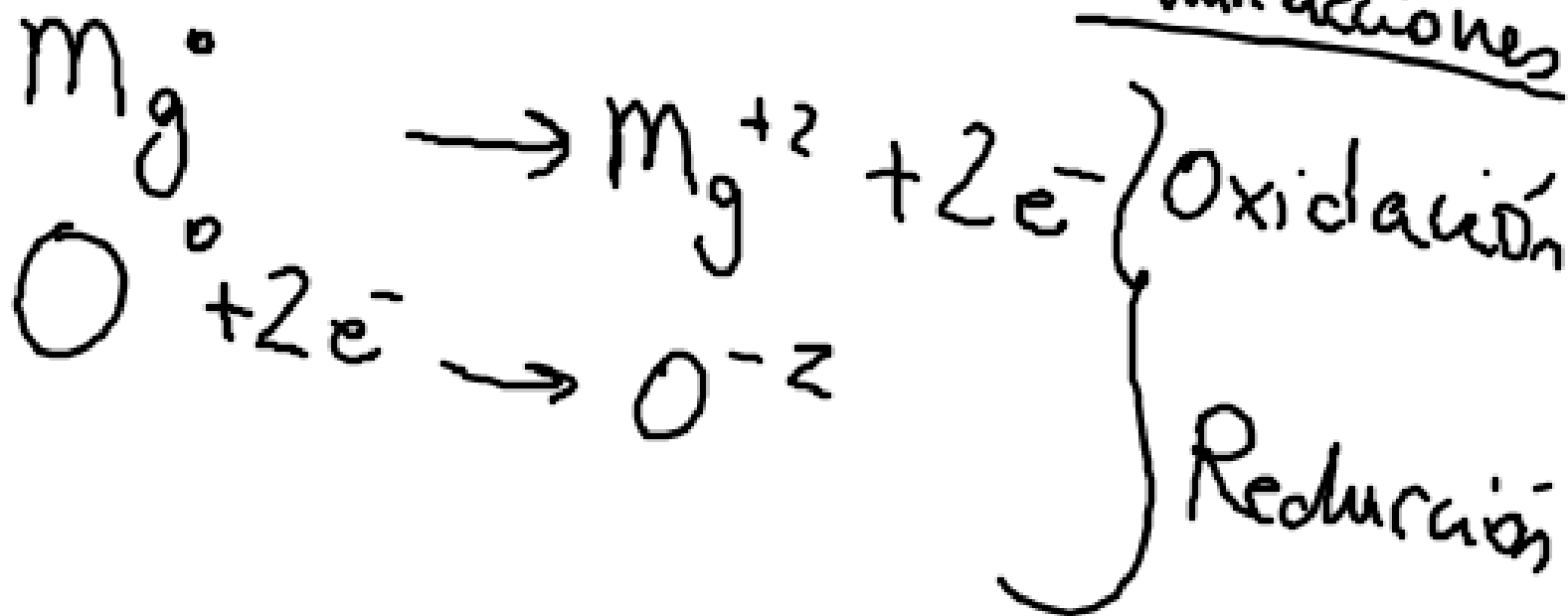
$$x = 2$$

$$2 + y - 8 = 0 \rightarrow y = 6$$

# Concepto de oxidación y reducción

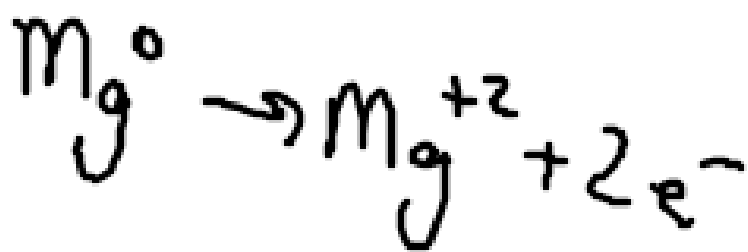


Es redox porque cambian los números de oxidación



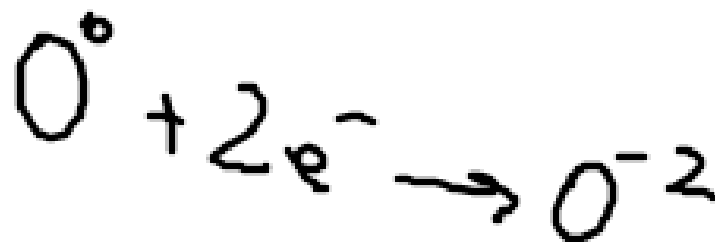
## Oxidación

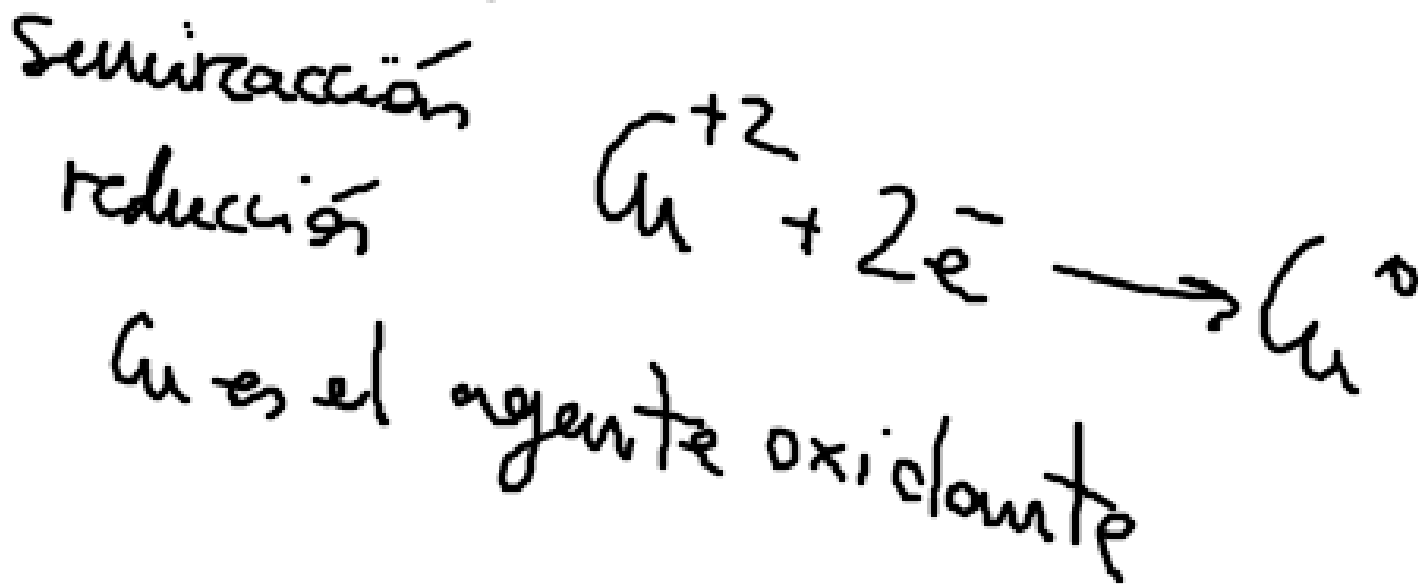
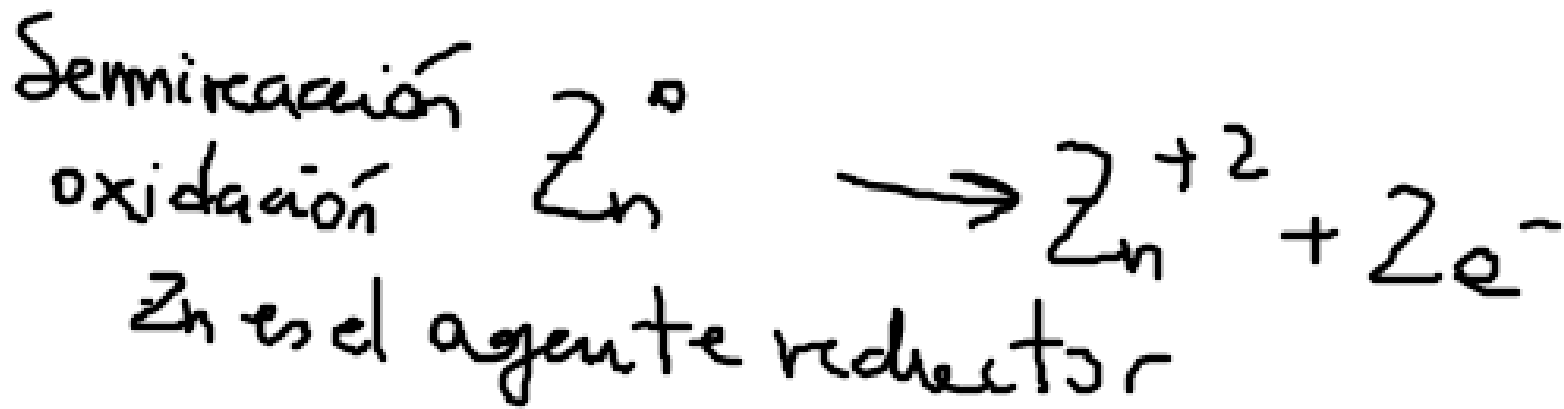
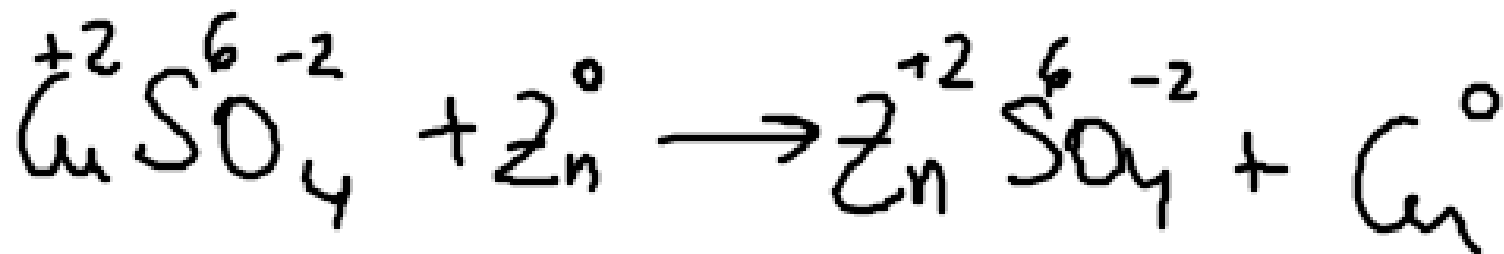
- Cede electrones
- Aumenta el n° de oxidación
- Agente reductor



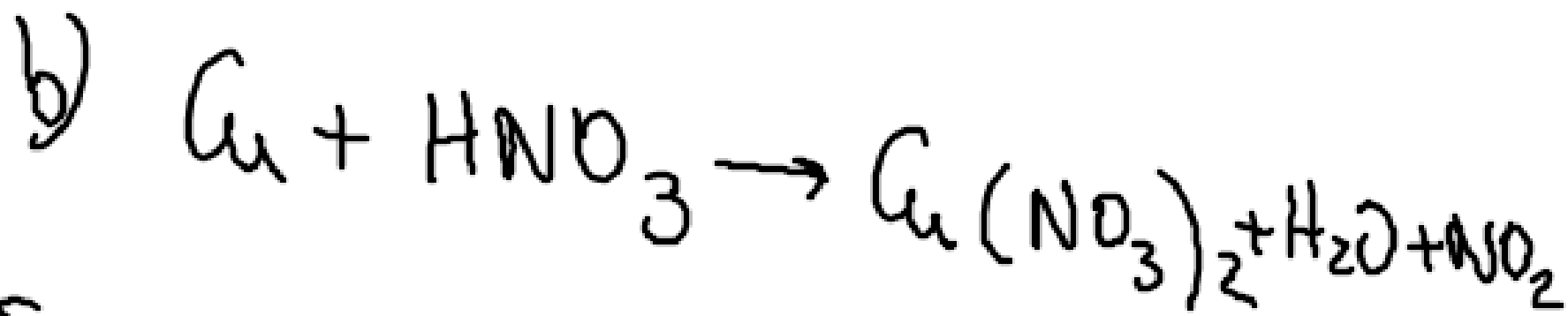
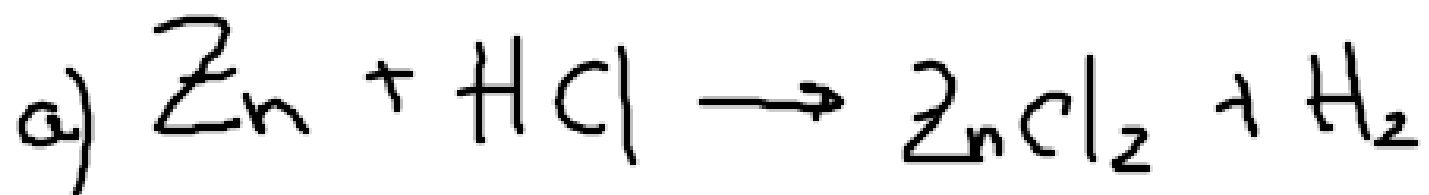
## Reducción

- Acepta electrones
- Reduce su n° de oxidación
- Agente oxidante.





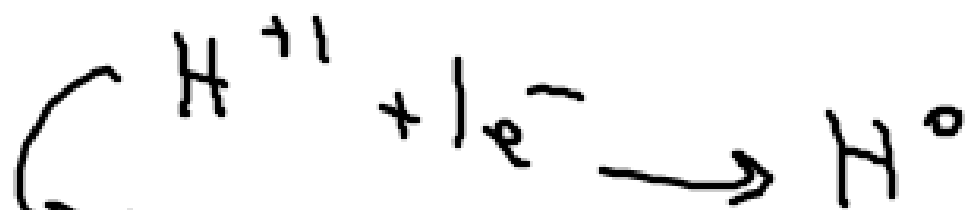




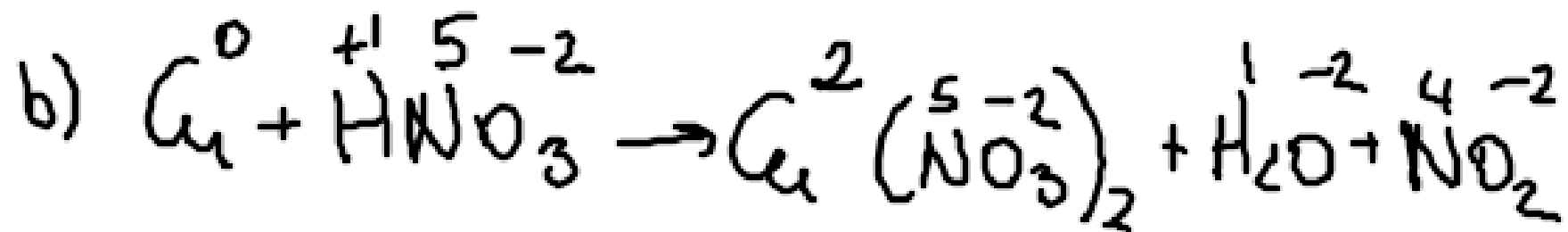
Semireacciones y agentes



→ semirreacción oxidación.  
Agente reductor.



→ semirreacción de reducción  
Agente oxidante.



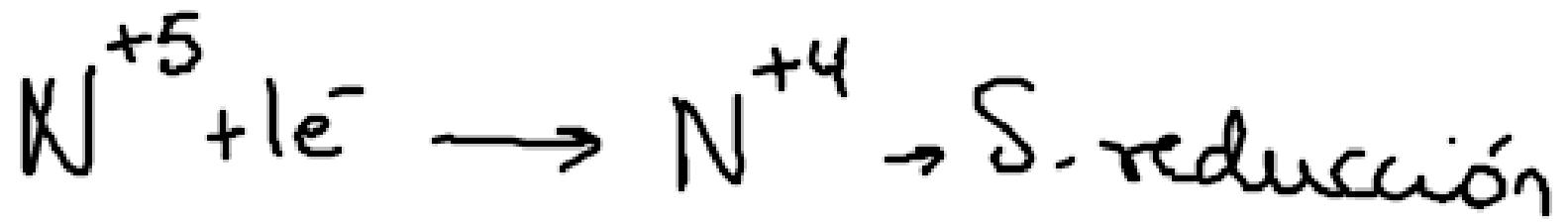
$$\overset{x}{\text{N}}\overset{-2}{\text{O}_2} \rightarrow x - 4 = 0 \rightarrow x = 4$$

$$\overset{+1}{\text{H}}\overset{x}{\text{N}}\overset{-2}{\text{O}_3} \rightarrow 1 + x - 6 = 0 \rightarrow x = 5$$

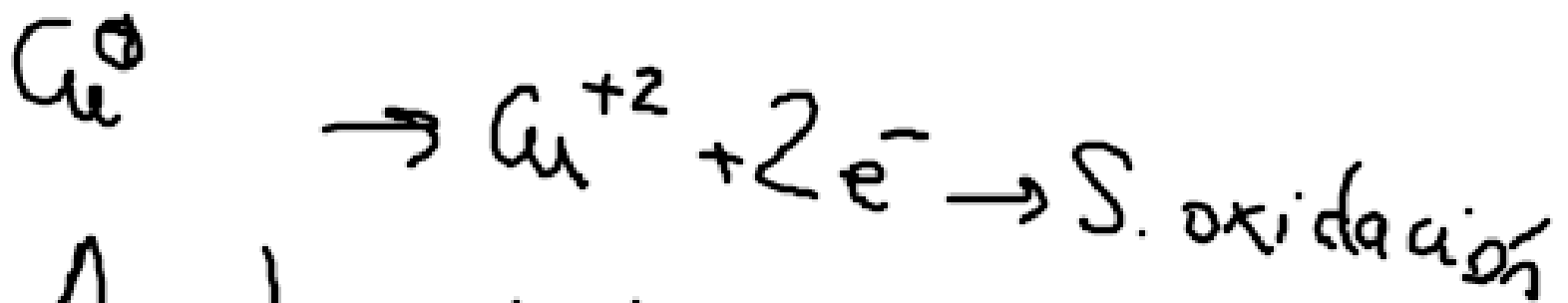
$$\overset{x}{\text{Cu}}(\overset{5}{\text{N}}\overset{-2}{\text{O}_3})_2 \rightarrow x + 2(5 - 6) = 0$$

$$x - 2 = 0$$

$$x = 2$$



Agente oxidante



Agente reductor.

1, 2, 3, 4, 5,