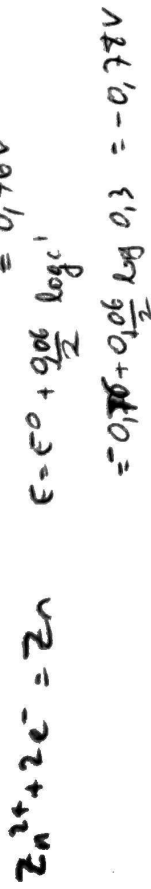
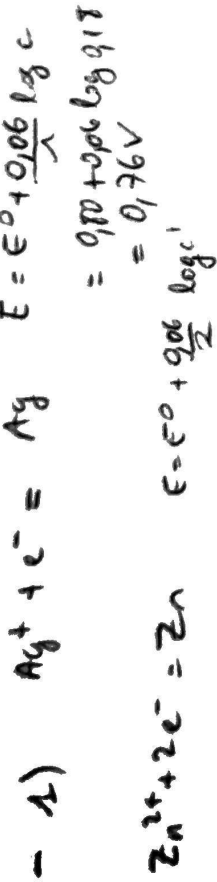
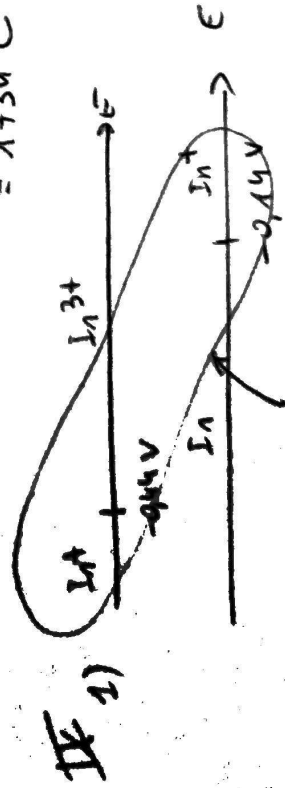


SERIE E - CORRIGE



2) Réactif limitant = Ag^+
 Quand la pile ne fonctionne plus: $[Ag^+] = 0$
 et $[Zn^{2+}] = 0,3 + \frac{0,18}{2}$
 $= 0,39 \text{ mol/L}$

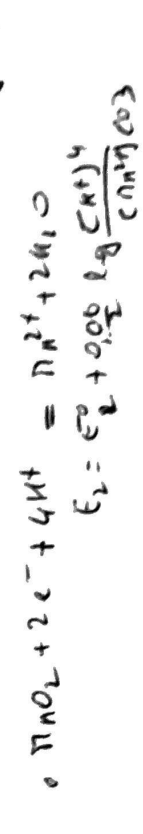
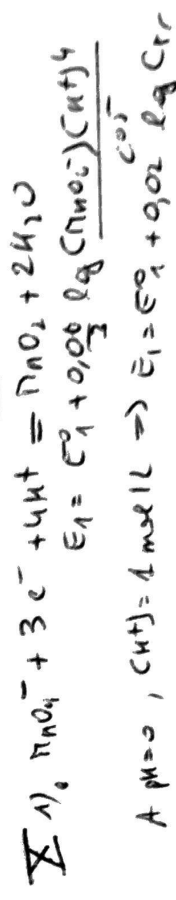
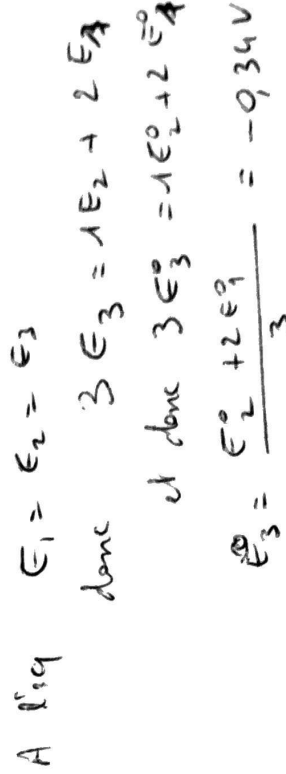
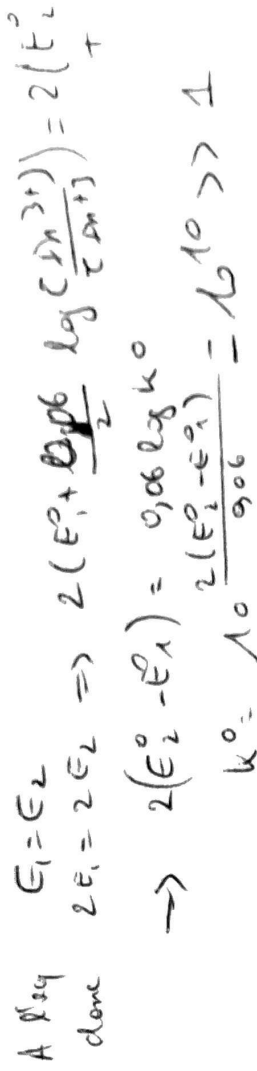
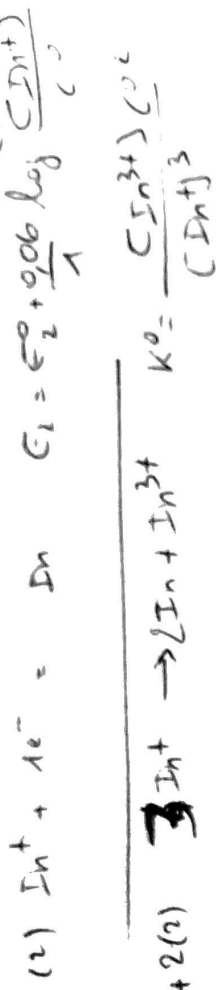
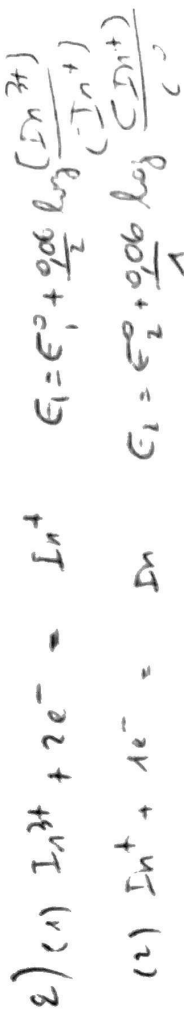
3) On a consommé $n_{Ag} = CV_0$
 $= 0,18$. $Q_1 = 0,018 \text{ mol}$
 Or il y a $1e^-$ pour $1Ag^+ \Rightarrow 0,018 \text{ mol d}'e^-$
 ont été débités. Chaque e^- a une charge $-e = -1,6 \cdot 10^{-19} C$
 $\Rightarrow Q_e \text{ d'électronie} = n_{e^-} \times |charge|$
 $= 0,018 \times 6,02 \cdot 10^{23} \times 1,6 \cdot 10^{-19}$
 $= 1734 C$



Domaines d'ajustement

$\Rightarrow Zn^{2+}$ ne peut jamais prédominer

$\Rightarrow Zn^{2+}$ se dissout



Ce sont des fonctions d'existence canoniques relatives

$$2(a) \quad 2H^+ + 2e^- = H_2 \quad \xrightarrow{\text{PILLOW}} \quad 2H_2O + 2e^- = H_2$$



$$R|E^{\oplus} = E_{Q_{1H_2O}}^{\oplus} + \frac{906}{4} \log \frac{f_{O_2}}{p^{\oplus}} \frac{C_{H^+}^4}{C_{CO_2}^4}$$



$$\Rightarrow E_{\oplus} = 1,23 - 0,06 \times 14 = 0,17 \text{ eV}$$

$$E_0 = 0 + 0.06 \lg \frac{CH^2/CO_2}{P_{H_2O}} = 0 - 0.06 \times 14$$

$$\Rightarrow \underline{F_{em} e = \psi_+ - \psi_- = 1,23V}$$

c) $P = 10 \text{ MW}$

$$I = \frac{P}{v} = \frac{10^4}{1,23}$$



On $4e^- = \text{deg de } -1,6 \cdot 10^{-19} \text{ C} \Rightarrow 1,88 \cdot 10^{26} e^-$
 Si 1311 moles d' e^-

