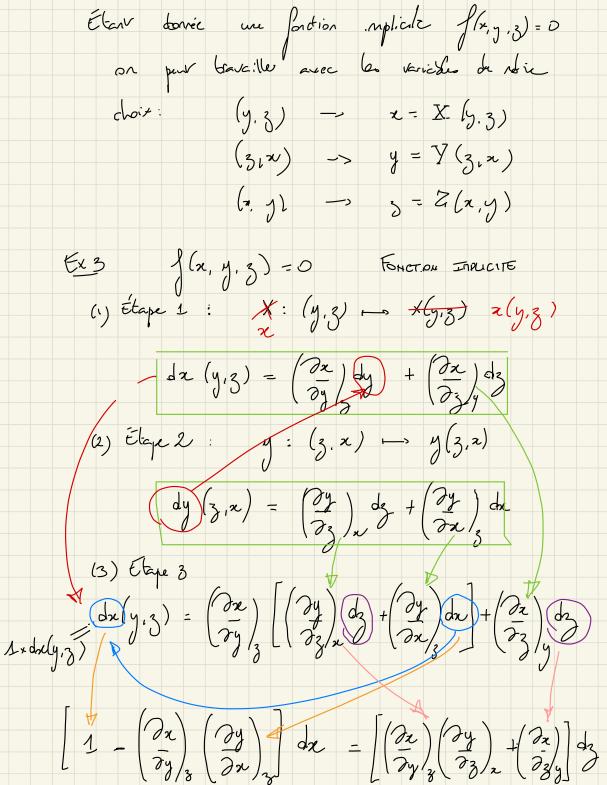
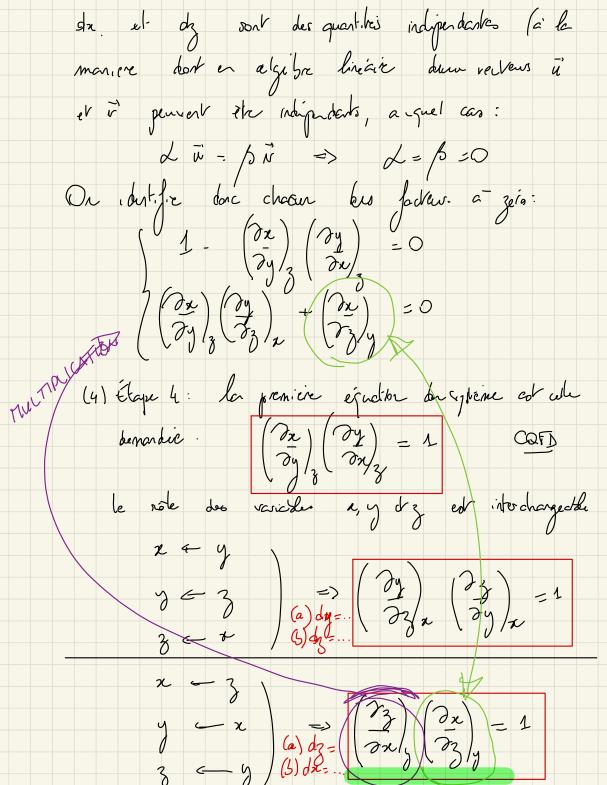
D2 La dernière bos: . Intro a la therma . Baxs mathematiques (colon différential, fondions · mpt rentes) . Forms deficiet cles: $\omega(x,y) = P(x,y)dx + O(xy)dy$. Différetielle à me fonction: J. (x,y) -> J(x.y) d (2,7) - (2) dx + (2) dy lemme de Poincare: So. V w (xy) - P(x,y)dx + Q(xy) by one forction of dant west la differentelle. P(2,y) - (If) er Q(xy) - (If)

Fonctions implicates: 3 variables (2, y, 3) peures être reliées sia une fonction f(z,y,z)=0Etant bonnée 2 de cer variables, le héorine der factions impliates établit (sous certaines conditions) que la troisseine peut être déterminée en fontion des deux autres Example: z-P (parnian) y = V (vdeme) 3 = T (temperature) f(P,V,T)=0 EQUATION DETA. f. (P,V,T) - PY - ART -> GAZ PARFAIT nombre de constrante des _, VAN DER WAALS R= dak $\int : \left(P, \sqrt{T}\right) \longrightarrow \left(P + \frac{an^2}{V^2}\right) \left(V - nb\right) - nRT$ = 8,314 J/md/kg





$$\frac{\partial x}{\partial y} \left(\frac{\partial y}{\partial x} \right)_{x} \left(\frac{\partial y}{\partial x} \right)_{y} + \left(\frac{\partial z}{\partial x} \right)_{y} \left(\frac{\partial z}{\partial z} \right)_{y} = 0$$

$$\Rightarrow \left(\frac{\partial x}{\partial y} \right)_{x} \left(\frac{\partial y}{\partial y} \right)_{x} \left(\frac{\partial z}{\partial x} \right)_{y} = -1$$

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$$\Rightarrow \left(\frac{\partial z}{\partial x} \right)_{y} \left(\frac{\partial z}{\partial y} \right)_{x} \left(\frac{\partial z}{\partial x} \right)_{y} = -1$$

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$$\Rightarrow \left(\frac{\partial z}{\partial y} \right)_{y} \left($$

dinante
$$\left(\frac{\partial \mathcal{L}}{\partial P}\right)_{T} = \left(\frac{\partial \mathcal{L}}{\partial T}\right)_{P}$$

Elage 1: primier number $\left(\frac{\partial \mathcal{L}}{\partial P}\right)_{T} : Variable indipolaries $\left(\frac{\partial \mathcal{L}}{\partial P}\right)_{T} = \left(\frac{\partial \mathcal{L}}{\partial$$

Etap 2 Second number

Representation
$$V(P,T)$$

$$- \left(\frac{\partial X_{+}}{\partial T}\right)_{P} = -\left(\frac{\partial}{\partial T}\left[-\frac{1}{V}\left(\frac{\partial V}{\partial P}\right)_{T}\right]_{P}^{P}$$

$$= \left(\frac{\partial}{\partial T}\left[\frac{1}{V}\left(\frac{\partial V}{\partial P}\right)_{T}\right]_{P}^{P}$$

$$- \left(\frac{\partial}{\partial T}\right)_{P}^{P} = \left(\frac{\partial}{\partial T}\left[\frac{\partial}{\partial P}\right]_{T}\right)_{P}^{P}$$

$$- \left(\frac{\partial}{\partial T}\right)_{P}^{P} = \left(\frac{\partial}{\partial T}\left[\frac{\partial}{\partial P}\right]_{T}\right)_{P}^{P}$$

$$- \left(\frac{\partial}{\partial T}\right)_{P}^{P} = \frac{1}{V^{2}}\left(\frac{\partial}{\partial P}\right)_{T}^{P}$$

$$- \left(\frac{\partial}{\partial T}\right)_{$$

$$\Rightarrow \begin{pmatrix} \partial V \\ \partial T \end{pmatrix}_{P} = nR \qquad \begin{pmatrix} R_{MV} & M & C.P. \end{pmatrix}$$

$$\Rightarrow \lambda = \frac{1}{V} \times RT \Rightarrow PV = nRT$$

$$\Rightarrow \lambda = \frac{1}{PV} \times RT$$

$$\Rightarrow \lambda$$

en utilisant les résultats de lix 3 Ex6