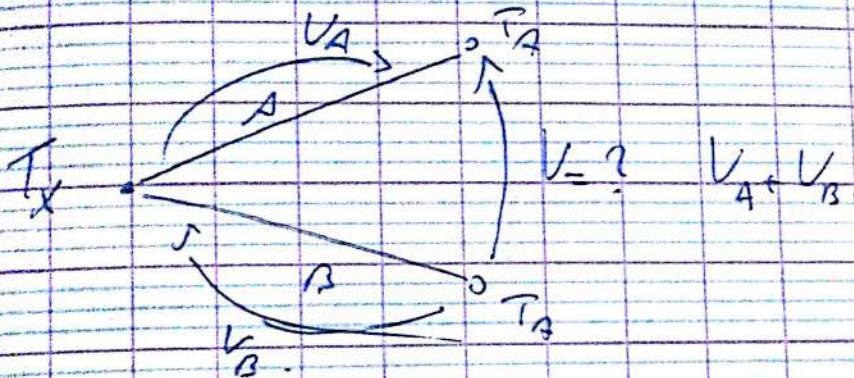


Dans tout ce qui suit, on suppose $\Theta_A(T) = \Theta_A \cdot dT$
 $\Delta V = \Theta_A (\bar{T}_x - \bar{T})$ "Approx° lin°".

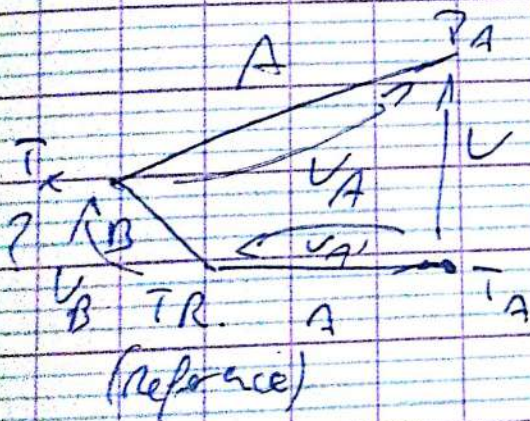
2°) Thermocouple

$\bar{T} \Delta T = \Theta_1$



$$V = \Theta_{BA} (\bar{T}_x - \bar{T}_A)$$

$$\Theta_{BA} = \Theta_B - \Theta_A$$



$$V_A = \Theta_A (\bar{T}_A - \bar{T}_x)$$

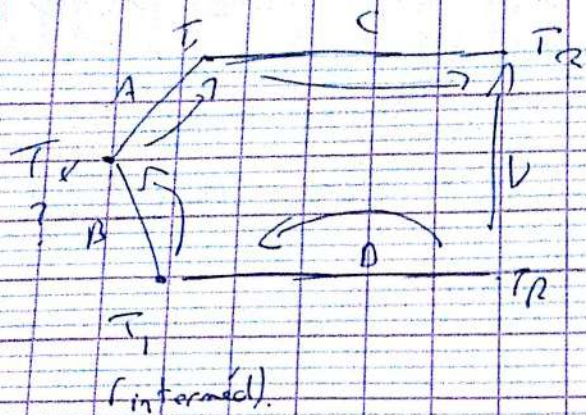
$$V_B = \Theta_B (\bar{T}_x - \bar{T}_R)$$

$$V_A' = \Theta_A (\bar{T}_R - \bar{T}_A)$$

$$V = \Theta_B (\bar{T}_x - \bar{T}_R) - \Theta_A (\bar{T}_x - \bar{T}_R)$$

$$V = \Theta_{BA} (\bar{T}_x - \bar{T}_R)$$

Type	Th Couple	T_{ref}	Sortie (mV)
T	Curve - Constant	-270°C → 350°C	-6 → 19
J	Fec. Constant	-200°C → 800°C	-8 → 65
K	Chromel - Alumel	-270°C → 1260°C	-5 → 50
E	Chromel - constantan	-270°C → 870°C	~



$$\begin{aligned} V_C &= G_C (T_2 - T_1) \\ V_A &= G_A (T_1 - T_x) \\ V_B &= G_B (T_x - T_1) \\ V_D &= G_D (T_2 - T_R) \end{aligned}$$

$$V_R = G_{CD} (T_2 - T_1) + G_{DA} (T_x - T_1)$$

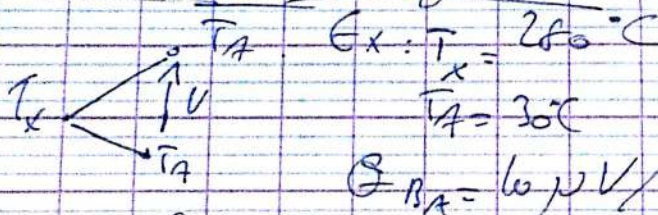
On veut 0

$$G_{DA} (T_x - T_R)$$

$$\begin{aligned} &= \text{Erreur } (G_{CD} (T_2 - T_1) + G_{DA} (T_x - T_1)) \\ &= G_{CD} (T_2 - T_1) - G_{AB} (T_2 - T_A) = 0 \end{aligned}$$

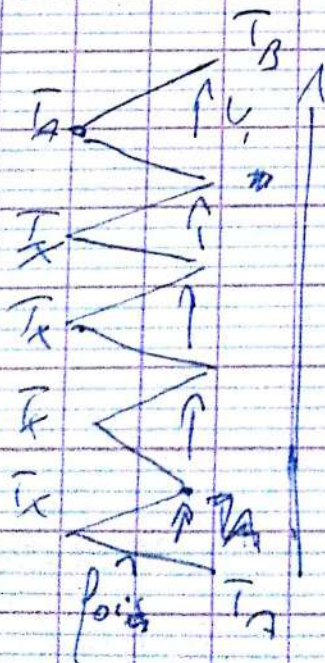
Il faut CD proche de AB
 $G_C = G_{AB}$

Sensibilité d'un thermocycle



$$V = G_{BA} (T_x - T_A) = 10 \cdot 10^{-6} \times 250 = 2,5 \text{ mV (petit)}$$

Techno



$$V = n G_{BA} (T_y - T_x)$$