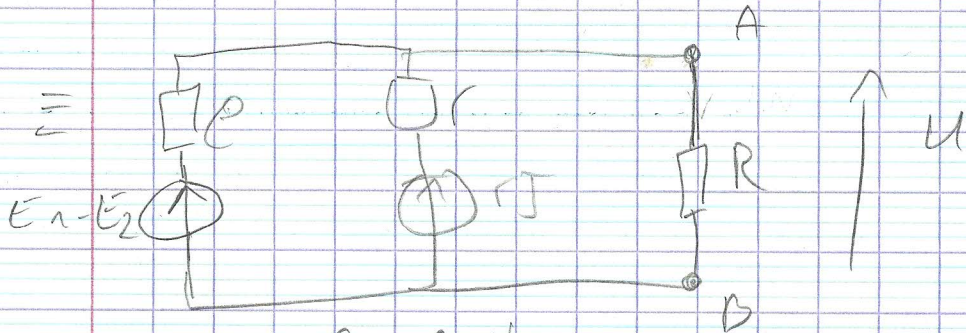
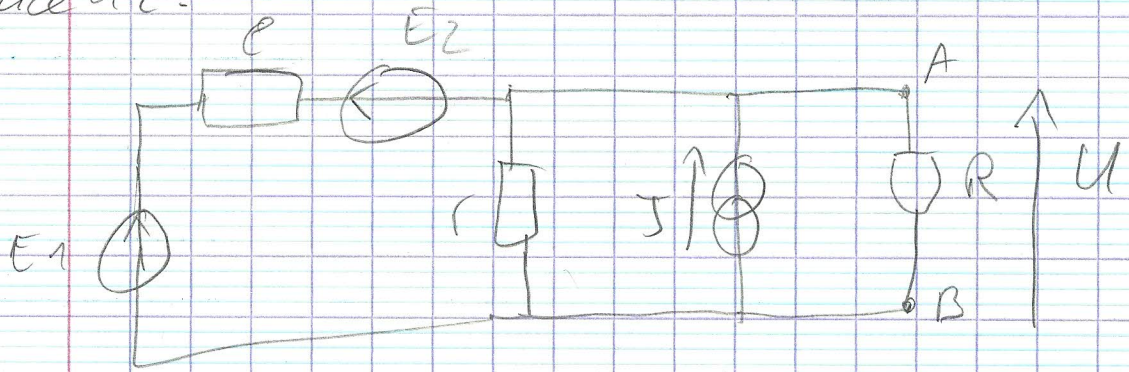
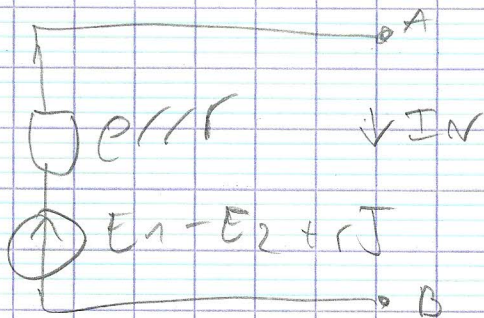


Exercice 12:

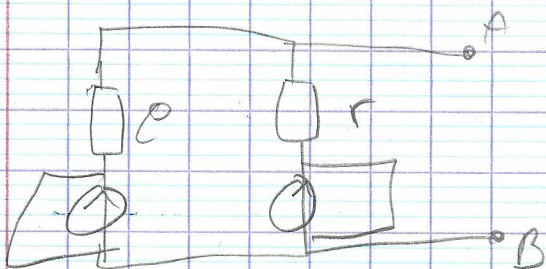


1/ calcul  $I_N$



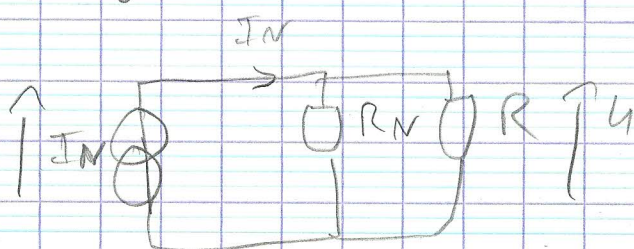
$$I_N = \frac{E_1 - E_2 + rJ}{r + R}$$

2/ calcul de  $R_N$



$$R_N = \frac{rR}{r + R}$$

3/ géné de norton



loi des noeuds:

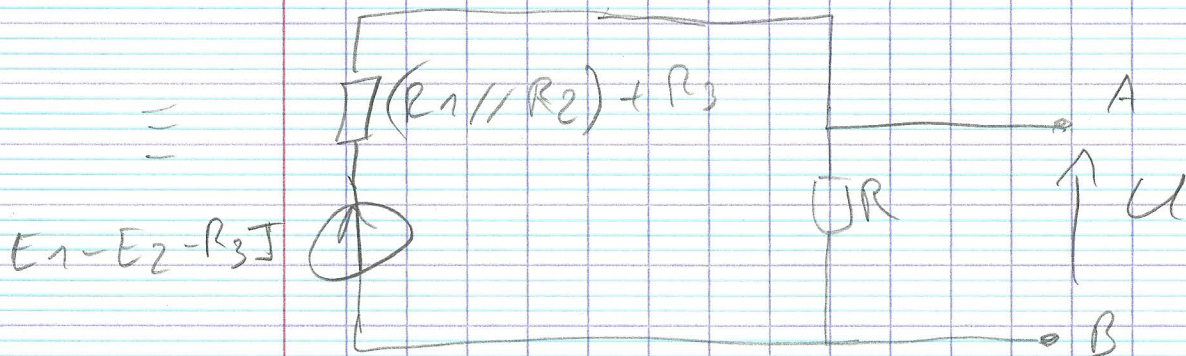
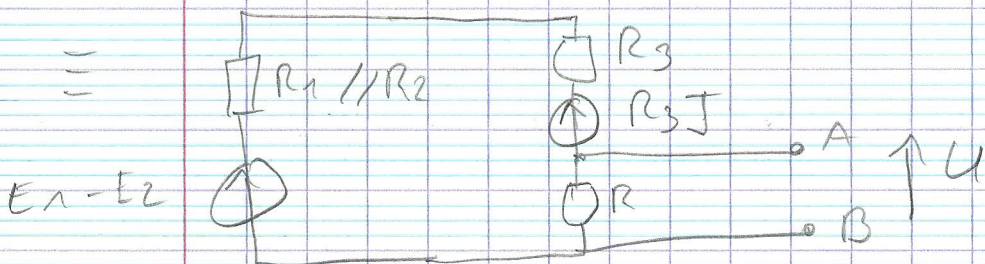
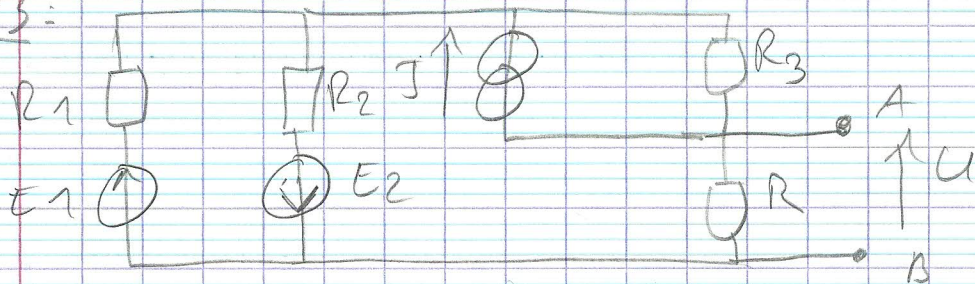
$$I_N = \frac{U}{R} + \frac{U}{R_N}$$

$$U \left( \frac{1}{R} + \frac{1}{R_N} \right) = I_N$$

$$U = I_N \times \left( \frac{R_N R}{R_N + R} \right)$$



Exercise 13:



$u = R \cdot I$

