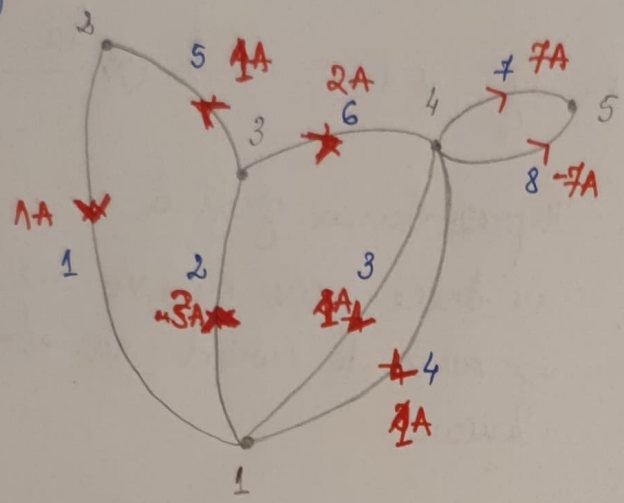
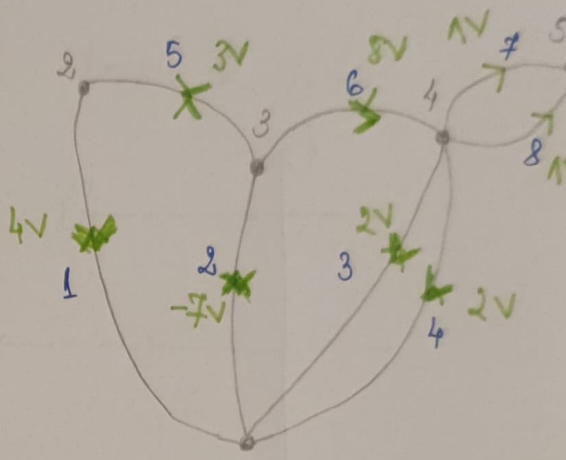
TEMĂ CURS 4

① 

Graful curenților pentru circuitul a



Graful tensiunilor pentru circuitul b

T.T : $\sum_{K=1}^{8} u_K^b \, i_K^a = 4\cdot 1 + 3\cdot 1 - 7\cdot 3 + 2\cdot 1 + 2\cdot 1 + 5\cdot 2 + 7\cdot 1 - 7\cdot 1 =$

$= 4 + 3 - 21 + 4 + 10 + 7 - 7 = 0$ W

② $u(i) = i \cdot R$ [Ω], R = constantă

$u(\alpha i_1 + i_2) = \alpha i_1 R + i_2 R = \alpha u(i_1) + u(i_2) \Rightarrow$

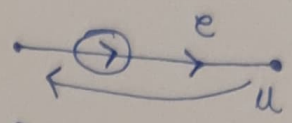
$\Rightarrow u(i)$ funcție liniară.

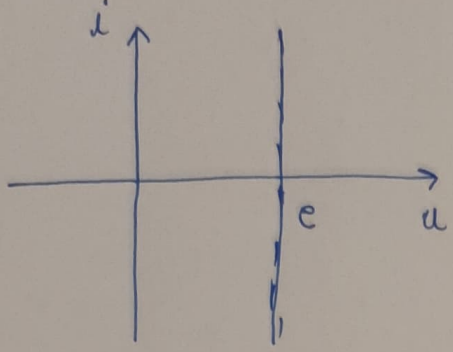
$i(u) = \frac{u}{R}$, R-const.

$i(\alpha u_1 + u_2) = \alpha \cdot \frac{u_1}{R} + \frac{u_2}{R} = \alpha \cdot i(u_1) + i(u_2) \Rightarrow$

$\Rightarrow i(u)$ funcție liniară.

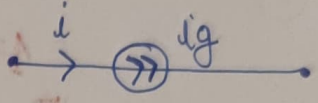
Sursa de tensiune : $u = e$, $\forall i$:

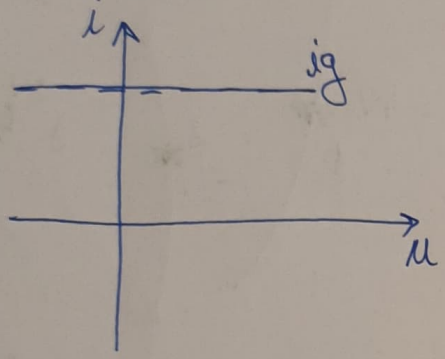




Reprezentarea grafică nu trece prin origine $\Rightarrow$ $\Rightarrow$ sursa de tensiune nu este rezistor liniar.

Sursa de curent : $i = i_g$, $\forall u$:





Reprezentarea grafică nu trece prin origine $\Rightarrow$ $\Rightarrow$ sursa de curent nu este rezistor liniar.

(3.)