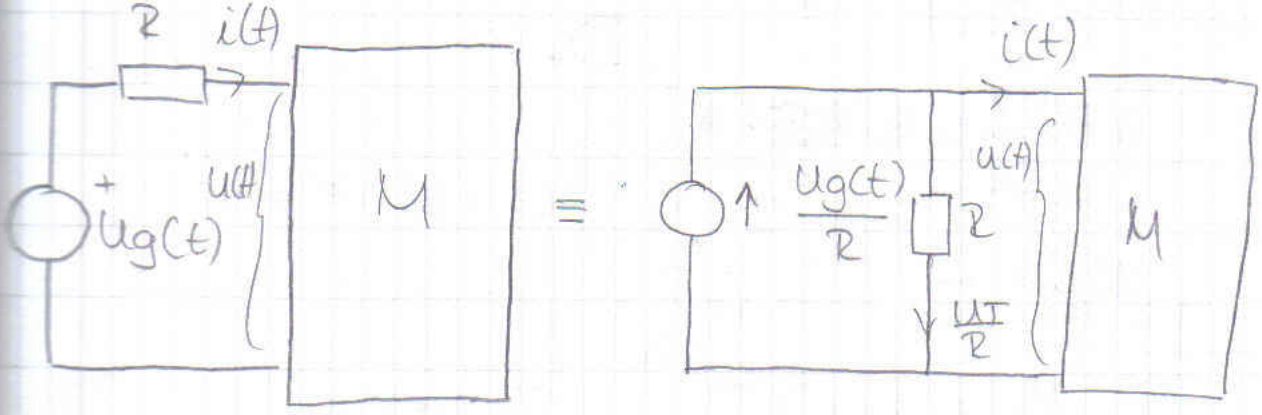
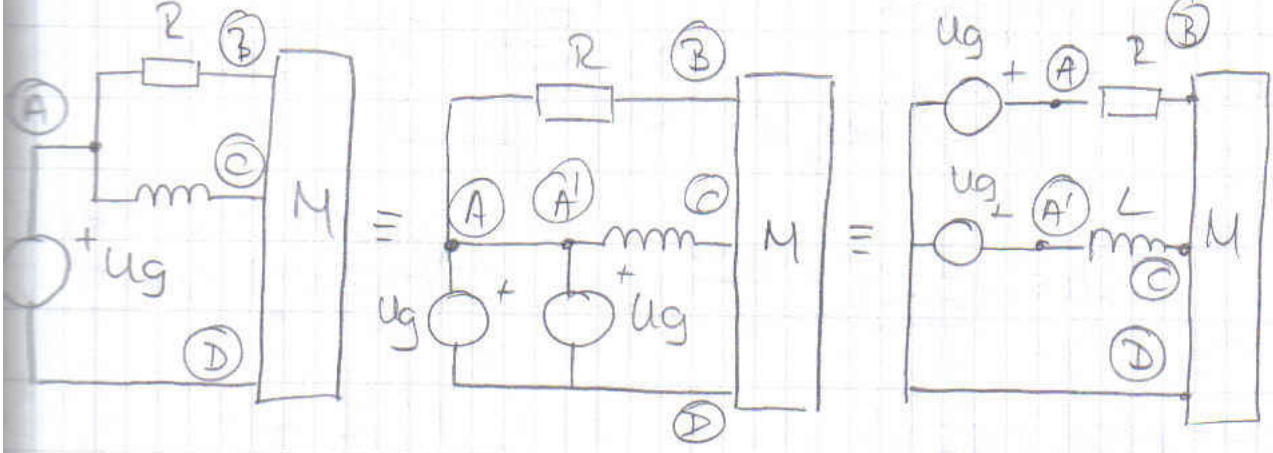
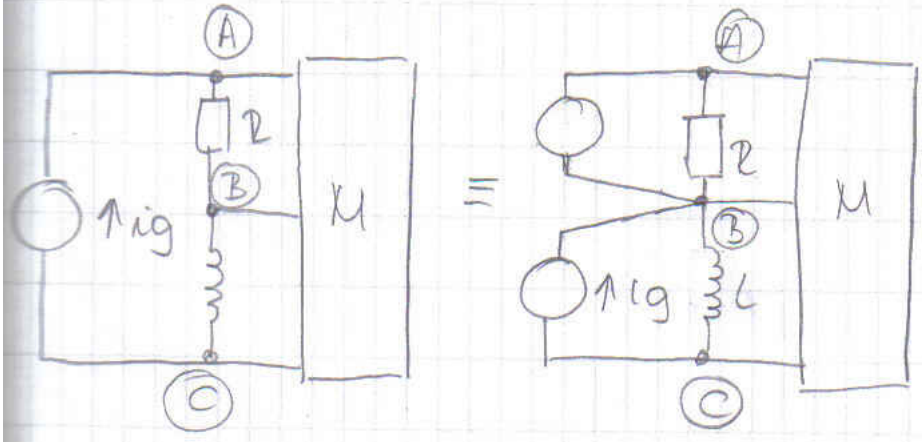
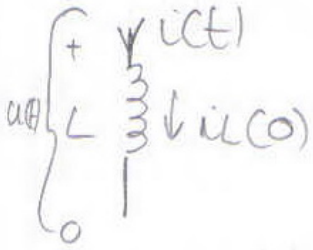
Transformiranje izvora:

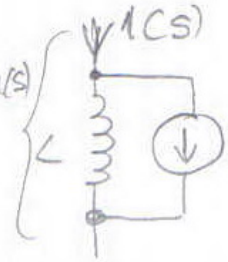




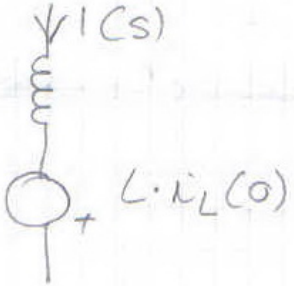




$\Rightarrow$



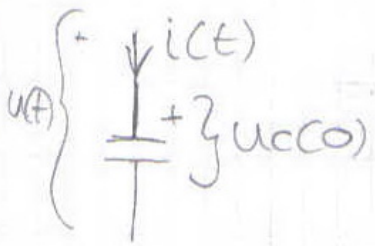
$\Rightarrow$



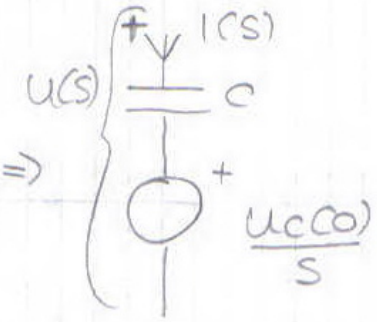
$$I(s) = \frac{1}{sL} U(s) + \frac{i_L(0)}{s}$$

$$U(s) = sL\,I(s) - L\,i_L(0)$$

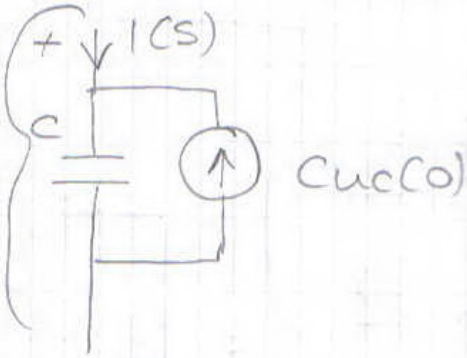
$$Z(s) = sL \qquad Y(s) = \frac{1}{sL}$$



$\Rightarrow$



$\Rightarrow$



$$U(s) = \frac{1}{sC} I(s) + \frac{u_c(0)}{s}$$

$$I(s) = sC\,U(s) - C\,u_c(0)$$

$$Z(s) = \frac{1}{sC} \qquad Y(s) = sC$$

Rj. jednadžbi preko matrica:

$$Ax + By = E$$
$$Cx + Dy = F$$

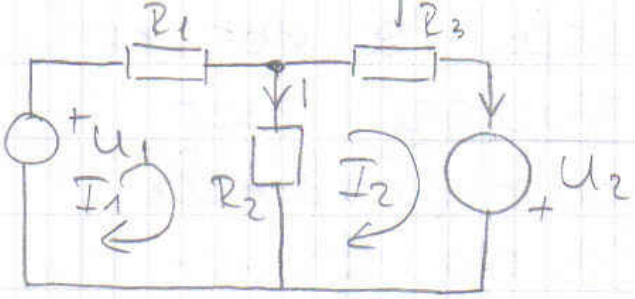
$$\begin{bmatrix} A & B \\ C & D \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} E \\ F \end{bmatrix}$$

$$\Delta = \begin{vmatrix} A & B \\ C & D \end{vmatrix} \quad \Delta_1 = \begin{vmatrix} E & B \\ F & D \end{vmatrix}$$

$$\Delta_2 = \begin{vmatrix} A & E \\ C & F \end{vmatrix}$$

$$x = \frac{\Delta 1}{\Delta} \quad y = \frac{\Delta 2}{\Delta}$$

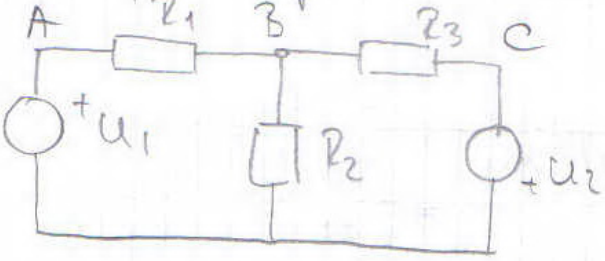
Konturne struje

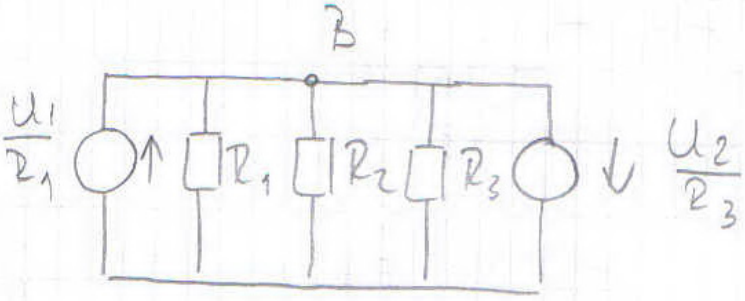


$$U_1 - R_1 I_1 - (I_1 - I_2) R_2 = 0$$
$$(I_1 - I_2) R_2 - I_2 R_3 + U_2 = 0$$

Metoda napona čvorova

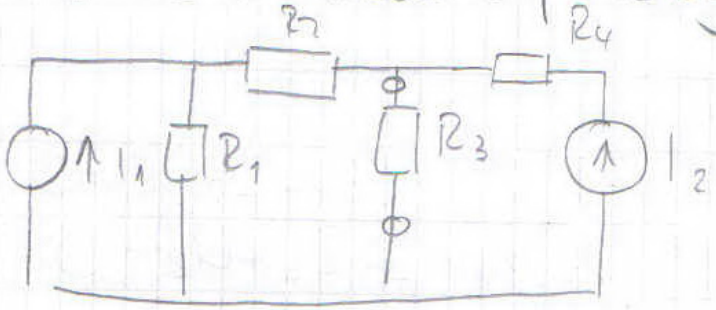
⇒ transf. naponske u strujne izvore



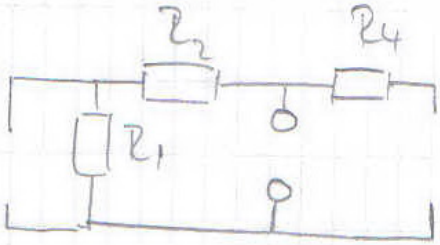


$$\varphi_B\left(\frac{1}{R_1}+\frac{1}{R_2}+\frac{1}{R_3}\right)=\frac{U_1}{R_1}-$$

Thevenin - metoda praznog hoda

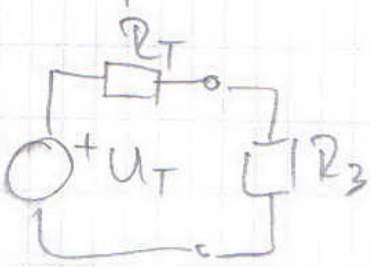


odspoji se npr. R_3, <u>nezavisni</u> izvori ugase (naponski - kratki spoj, strujni - beskon. otpor), izračuna otpor takve urežje



$$R_T = R_2 + R_1$$

te izračuna sa upaljenim izvorima napon na odspojenom elementu (R_3 npr.)



Norton – kratki spoj

tražena grana se kratko-spaja, te računa struja, otpor se računa kao i kod thevenina

Milman ⇒ zbroj struja koje ulaze u čvor kroz sva vodljivosti spojenih na isti čvor
= potencijal tog čvora

NORMIRANJE

$$R_n = R / R_0$$

$$C_n = \omega_0 \cdot C \cdot R_0$$

$$L_n = \frac{\omega_0 \cdot L}{R_0}$$