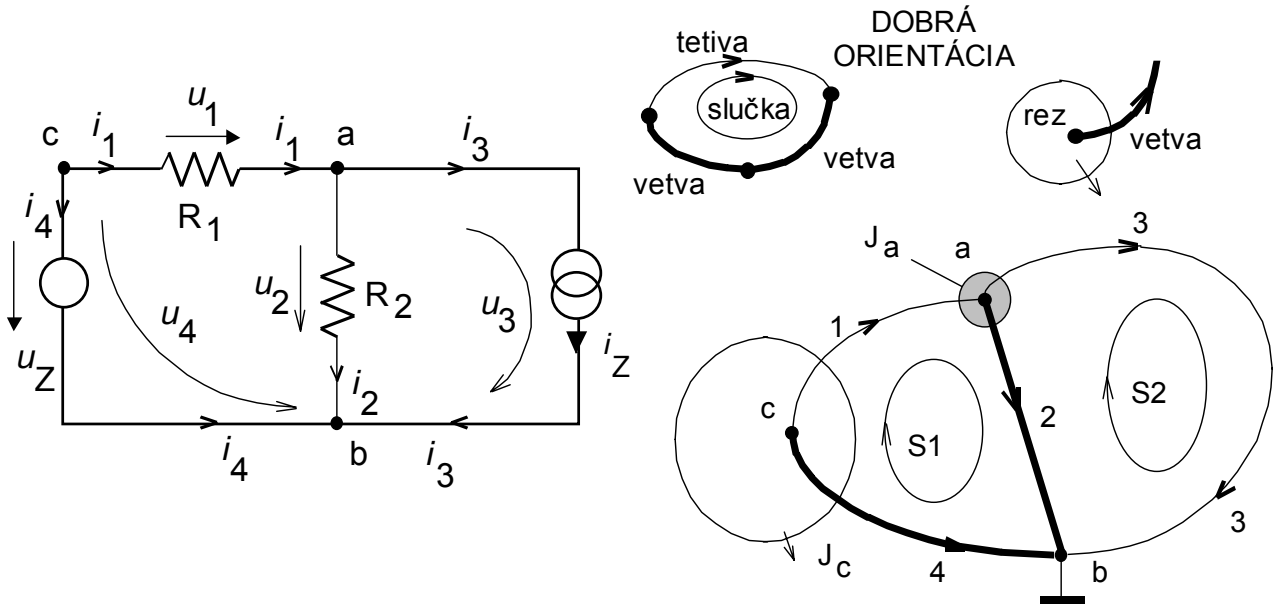


# MATICOVÁ FORMULÁCIA RIEŠENIA OBVODU METODOU UZLOVÝCH NAPÄTÍ A SLUČKOVÝCH PRÚDOV



Incidenčné matice:

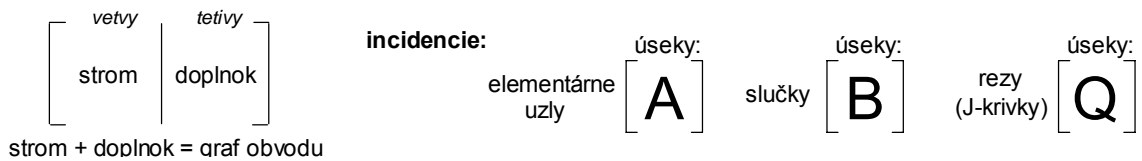
$$[A] = \begin{matrix} & \begin{matrix} 4 & 2 & 3 & 1 \end{matrix} \\ \begin{matrix} a \\ c \end{matrix} & \left[ \begin{array}{cc|cc} 0 & 1 & 1 & -1 \\ 1 & 0 & 0 & 1 \end{array} \right] = [A_V] \mid [A_T] \end{matrix} \quad [A_V] = \begin{matrix} & \begin{matrix} 4 & 2 \end{matrix} \\ \begin{matrix} a \\ c \end{matrix} & \left[ \begin{array}{cc} 0 & 1 \\ 1 & 0 \end{array} \right] \end{matrix} \quad [A_T] = \begin{matrix} & \begin{matrix} 3 & 1 \end{matrix} \\ \begin{matrix} a \\ c \end{matrix} & \left[ \begin{array}{cc} 1 & -1 \\ 0 & 1 \end{array} \right] \end{matrix}$$

$$[B] = \begin{matrix} & \begin{matrix} 4 & 2 & 3 & 1 \end{matrix} \\ \begin{matrix} s2 \\ s1 \end{matrix} & \left[ \begin{array}{cc|cc} 0 & -1 & 1 & 0 \\ -1 & 1 & 0 & 1 \end{array} \right] = [B_V] \mid [1_T] \end{matrix} \quad [B_V] = \begin{matrix} & \begin{matrix} 4 & 2 \end{matrix} \\ \begin{matrix} s2 \\ s1 \end{matrix} & \left[ \begin{array}{cc} 0 & -1 \\ -1 & 1 \end{array} \right] \end{matrix} \quad [B_T] = \begin{matrix} & \begin{matrix} 3 & 1 \end{matrix} \\ \begin{matrix} s2 \\ s1 \end{matrix} & \left[ \begin{array}{cc} 1 & 0 \\ 0 & 1 \end{array} \right] \end{matrix}$$

$\uparrow$   
 $B_T$

$$[Q] = \begin{matrix} & \begin{matrix} 4 & 2 & 3 & 1 \end{matrix} \\ \begin{matrix} Jc \\ Ja \end{matrix} & \left[ \begin{array}{cc|cc} 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & -1 \end{array} \right] = [1_T] \mid [Q_V] \end{matrix} \quad [Q_T] = \begin{matrix} & \begin{matrix} 4 & 2 \end{matrix} \\ \begin{matrix} Jc \\ Ja \end{matrix} & \left[ \begin{array}{cc} 1 & 0 \\ 0 & 1 \end{array} \right] \end{matrix} \quad [Q_V] = \begin{matrix} & \begin{matrix} 3 & 1 \end{matrix} \\ \begin{matrix} Jc \\ Ja \end{matrix} & \left[ \begin{array}{cc} 0 & 1 \\ 1 & -1 \end{array} \right] \end{matrix}$$

$\uparrow$   
 $Q_T$



Prúdový KZ  
pre elementárne uzly

$$[A] \cdot [i] = [0]$$

Napätový KZ  
pre slučky

$$[B] \cdot [u] = [0]$$

Prúdový KZ  
pre rezy (J-krivky)

$$[Q] \cdot [i] = [0]$$