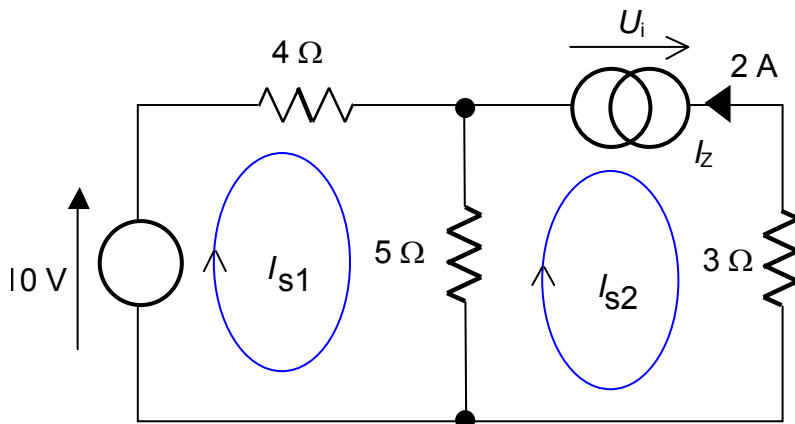


SLUČKOVÉ PRÚDY – takmer vyriešené príklady

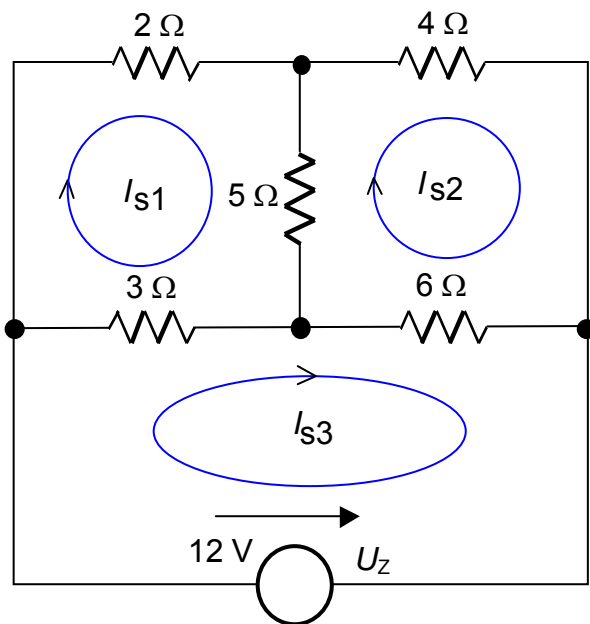


$$I_{S1}(4 + 5) - I_{S2}5 = -10$$

$$I_{S2}(5 + 3) - I_{S1}5 = -U_i$$

$$I_{S2} = -2$$

$$\begin{bmatrix} 9 & 0 \\ -5 & 1 \end{bmatrix} \cdot \begin{bmatrix} I_{S1} \\ U_i \end{bmatrix} = \begin{bmatrix} -20 \\ 16 \end{bmatrix}$$

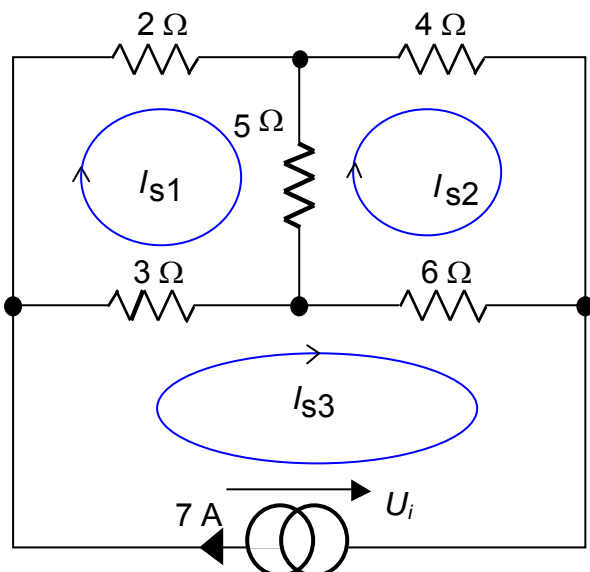


$$I_{S1}(2 + 5 + 3) - I_{S2}5 - I_{S3}3 = 0$$

$$I_{S2}(5 + 4 + 6) - I_{S1}5 - I_{S3}6 = 0$$

$$I_{S3}(3 + 6) - I_{S1}3 - I_{S2}6 = 12$$

$$\begin{bmatrix} 10 & -5 & -3 \\ -5 & 15 & -6 \\ -3 & -6 & 9 \end{bmatrix} \cdot \begin{bmatrix} I_{S1} \\ I_{S2} \\ I_{S3} \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 12 \end{bmatrix}$$



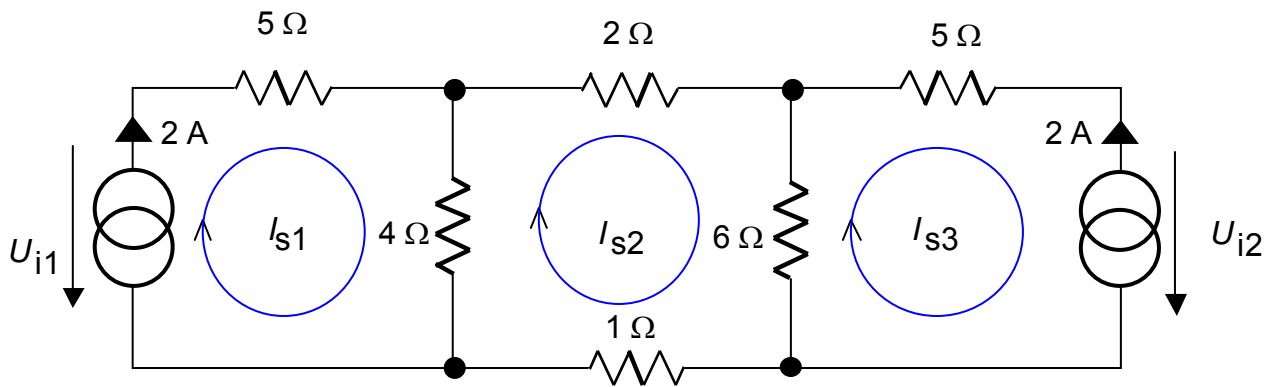
$$I_{S1}(2 + 5 + 3) - I_{S2}5 - I_{S3}3 = 0$$

$$I_{S2}(5 + 4 + 6) - I_{S1}5 - I_{S3}6 = 0$$

$$I_{S3}(3 + 6) - I_{S1}3 - I_{S2}6 = U_i$$

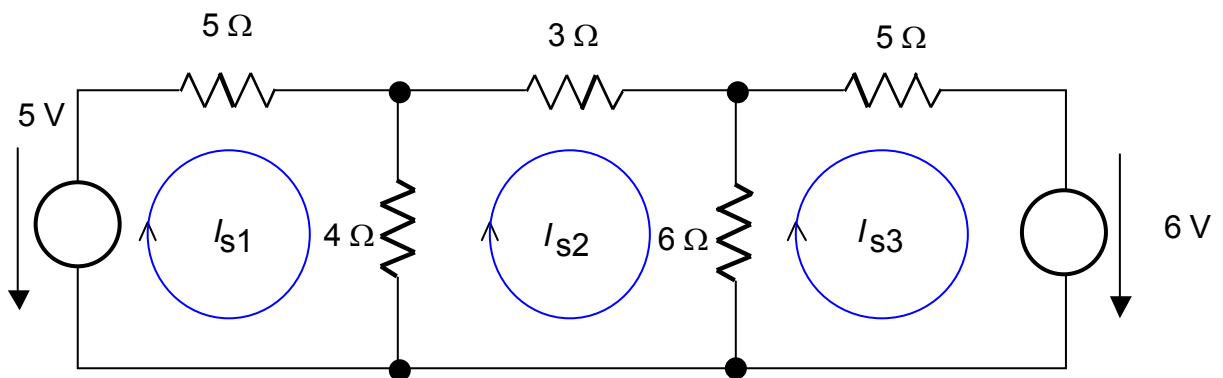
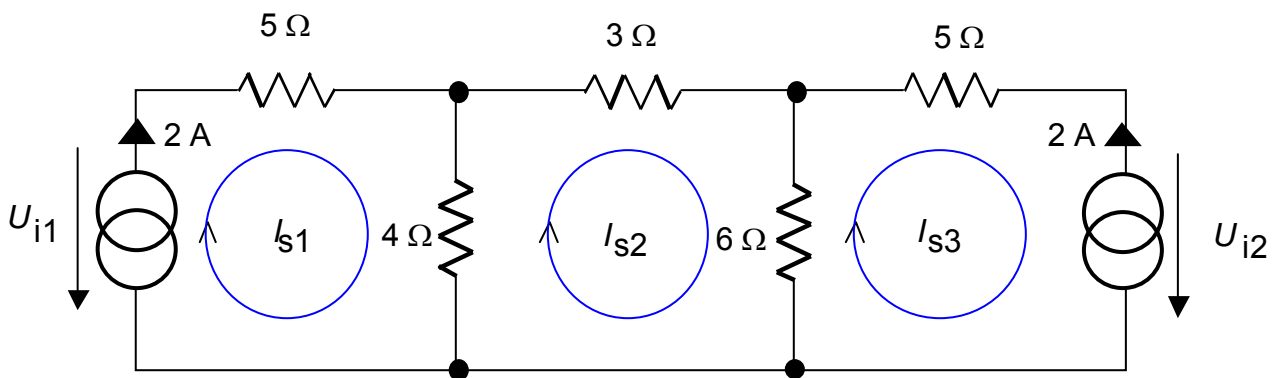
$$I_{S3} = 7$$

$$\begin{bmatrix} 10 & -5 & 0 \\ -5 & 15 & 0 \\ -3 & -6 & -1 \end{bmatrix} \cdot \begin{bmatrix} I_{S1} \\ I_{S2} \\ U_i \end{bmatrix} = \begin{bmatrix} 21 \\ 42 \\ -63 \end{bmatrix}$$



$$\begin{aligned}
 I_{s1}(5+4) - I_{s2}4 - I_{s3}0 &= U_{i1} \\
 I_{s2}(4+2+6+1) - I_{s1}4 - I_{s3}6 &= 0 \\
 I_{s3}(6+5) - I_{s2}6 - I_{s1}0 &= -U_{i2}
 \end{aligned}
 \quad
 \begin{bmatrix}
 -4 & -1 & 0 \\
 13 & 0 & 0 \\
 -6 & 0 & 1
 \end{bmatrix}
 \cdot
 \begin{bmatrix}
 I_{s2} \\
 U_{i1} \\
 U_{i2}
 \end{bmatrix}
 =
 \begin{bmatrix}
 -18 \\
 -4 \\
 22
 \end{bmatrix}$$

$$I_{s1} = 2, I_{s3} = -2$$



$$\begin{aligned}
 I_{s1}(5+4) - I_{s2}4 - I_{s3}0 &= 5 \\
 I_{s2}(4+3+6) - I_{s1}4 - I_{s3}6 &= 0 \\
 I_{s3}(6+5) - I_{s2}6 - I_{s1}0 &= -6
 \end{aligned}
 \quad
 \begin{bmatrix}
 9 & -4 & 0 \\
 -4 & 13 & -6 \\
 0 & -6 & 11
 \end{bmatrix}
 \cdot
 \begin{bmatrix}
 I_{s1} \\
 I_{s2} \\
 I_{s3}
 \end{bmatrix}
 =
 \begin{bmatrix}
 5 \\
 0 \\
 -6
 \end{bmatrix}$$