U_1[V]	U_2 [V]	R_1 [Ω]	R_2 [Ω]	R_3 [Ω]	R_4 [Ω]	R_5 [Ω]	R_6 [Ω]	R_7 [Ω]	R_8 [Ω]
100	80	450	810	190	220	220	720	260	180

$$U_{12} = U_1 + U_2 = 100 + 80 = 180V$$

$$R_{56} = \frac{R_5 R_6}{R_5 + R_6} = \frac{220 \cdot 720}{220 + 720} = 168.510638297872333\Omega$$

$$R_{78} = R_7 + R_8 = 260 + 180 = 440\Omega$$

Nyní provedeme transfiguraci trojuhelník hvězda

$$R_A = \frac{R_1 R_2}{R_1 + R_2 + R_3} = \frac{450 \cdot 810}{450 + 810 + 190} = \frac{364500}{1450} = 251.379310344827682762\Omega$$

$$R_B = \frac{R_1 R_3}{R_1 + R_2 + R_3} = \frac{450 \cdot 190}{450 + 810 + 190} = \frac{85500}{1450} = 58.9655172413793102\Omega$$

$$R_C = \frac{R_2 R_3}{R_1 + R_2 + R_3} = \frac{810 \cdot 190}{450 + 810 + 190} = \frac{153900}{1450} = 106.137931034482762\Omega$$

$R_{B5} = R_B + R_{56} = 58.96551724137931 + 168.51063829787233 = 227.476155539251642\Omega$

$$R_{C4} = R_C + R_4 = 106.13793103448276 + 220 = 326.137931034482762\Omega$$

$$R_{B5C4} = \frac{R_{B5} R_{C4}}{R_{B5} + R_{C4}} = \frac{227.47615553925164 \cdot 326.13793103448276}{227.47615553925164 + 326.13793103448276} = 134.007794466351162\Omega$$

$R_{EKV} = R_A + R_{B5C4} + R_{78} = 251.3793103448276 + 134.00779446635116 + 440 = 825.387104811117872\Omega$

Celkový proud I

$$I = \frac{U}{R_{EKV}} = \frac{180}{825.3871048111787} = 0.218079491369298832A$$

$U_{RA} = I \cdot R_A = 0.21807949136929883 \cdot 251.37931034482768276 = 54.820672140765142V$

$U_{B5C4} = I \cdot R_{B5C4} = 0.21807949136929883 \cdot 134.00779446635116 = 29.224351656743398V$

$$I_{RC4} = \frac{U_{B5C4}}{R_{C4}} = \frac{29.224351656743398}{326.13793103448276} = 0.089607337496887142A$$

$U_{RC} = I_{RC4} \cdot R_C = 0.0896073374968871 \cdot 106.13793103448276 = 9.510737407428229V$

$U_{R2} = U_{RA} + U_{RC} = 9.510737407428229 + 54.82067214076514 = \mathbf{64.33140954819336V}$

$$I_{R2} = \frac{U_{R2}}{R_2} = \mathbf{0.07942149326937452A}$$

//How the hell Am I supposed to get UR2?