prvni priklad zadani C

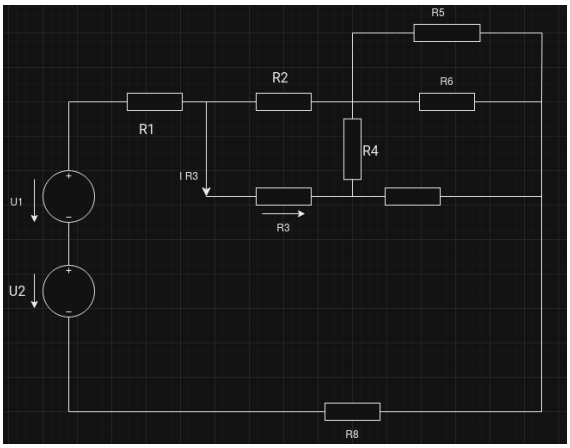

Figure 1: Uprava na pomoci hvezdy

$$R56 = \frac{R_6 \times R_5}{R_6 + R_5}$$

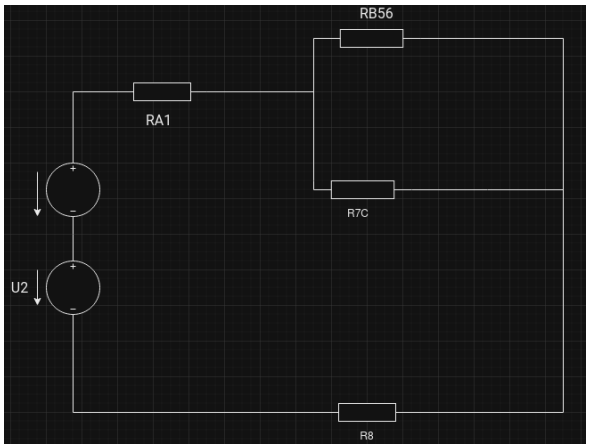

Figure 2: dalsi uprava

$$R_{A1} = \frac{R_2 \times R_3}{R_2 + R_3 + R_4} + R_1$$

$$R_{A1} = \frac{810 \times 220}{810 + 220 + 190} + 450$$

$$R_{B56} = \frac{R_2 \times R_4}{R_2 + R_3 + R_4} + \frac{R_6 \times R_5}{R_6 + R_5}$$

$$R_{B56} = \frac{810 \times 220}{810 + 190 + 720} + \frac{220 \times 720}{220 + 720} = 284.320$$

$$R_{C7} = \frac{R_3 \times R_4}{R_2 + R_3 + R_4} + R_7$$

$$R_{C7} = \frac{190 \times 220}{810 + 190 + 720} + 260 = 284.302$$

$$R = \frac{270.340 \times 284.320}{270.340 + 284.320} + 576.148 + 180 \quad \Rightarrow \quad R = 894.770$$

$$I = \frac{U}{R} = \frac{180}{894.770} \quad \Rightarrow \quad I = 0.201$$

$$U_{R3} = U - U_{R2}$$

$$U_{R2} = R_2 \times I$$

$$U_{R2} = 810 \times 0.201 = 162.81\,\mathrm{V}$$

$$U_{R3} = 180 - 810 \times 0.201 = 180 - 162.81 = 17.19\,\mathrm{V}$$

$$I_{R3} = \frac{U_{R3}}{R_3}$$

$$I_{R3} = \frac{17.19}{190} = 0.0905\,\mathrm{A}$$