



$$U_{A1} = U_1 \cdot \frac{R_1 + R_X}{R_X}$$

$$U_{A2} = -U_2 \cdot \frac{R_1}{R_X}$$

$$U_{B1} = -U_1 \cdot \frac{R_2}{R_X}$$

$$U_{B2} = U_2 \cdot \frac{R_2 + R_X}{R_X}$$

$$U_A = U_1 \cdot \frac{R_1 + R_X}{R_X} - U_2 \cdot \frac{R_1}{R_X}$$

$$U_B = U_2 \cdot \frac{R_2 + R_X}{R_X} - U_1 \cdot \frac{R_2}{R_X}$$

$$U_V = U_B \frac{R_6}{R_4 + R_6} \cdot \frac{R_3 + R_5}{R_3} - U_A \frac{R_5}{R_3} = \left[\left(U_2 \cdot \frac{R_2 + R_X}{R_X} - U_1 \cdot \frac{R_2}{R_X} \right) \cdot \frac{R_6}{R_4 + R_6} \cdot \frac{R_3 + R_5}{R_3} \right] - \left[\left(U_1 \cdot \frac{R_1 + R_X}{R_X} - U_2 \cdot \frac{R_1}{R_X} \right) \cdot \frac{R_5}{R_3} \right] =$$

$$\text{podmínka: } R_3 = R_4 = R_5 = R_6 = R$$

$$U_V = \left[\left(U_2 \cdot \frac{R_2 + R_X}{R_X} - U_1 \cdot \frac{R_2}{R_X} \right) \cdot \overbrace{\frac{R}{2R} \cdot \frac{2R}{R}}^1 \right] - \left[\left(U_1 \cdot \frac{R_1 + R_X}{R_X} - U_2 \cdot \frac{R_1}{R_X} \right) \cdot \overbrace{\frac{R}{R}}^1 \right]$$

$$\text{podmínka: } R_1 = R_2 = R$$

$$U_V = \left[\left(U_2 \cdot \frac{R + R_X}{R_X} - U_1 \cdot \frac{R}{R_X} \right) \right] - \left[\left(U_1 \cdot \frac{R + R_X}{R_X} - U_2 \cdot \frac{R}{R_X} \right) \right] = U_2 \cdot \frac{R + R_X}{R_X} + U_2 \cdot \frac{R}{R_X} - U_1 \cdot \frac{R + R_X}{R_X} - U_1 \cdot \frac{R}{R_X} =$$

$$= (U_2 - U_1) \cdot \frac{R + R_X}{R_X} + (U_2 - U_1) \cdot \frac{R}{R_X}$$

$$U_V = (U_2 - U_1) \cdot \left(1 + \frac{2R}{R_X} \right)$$