Cv-7

5) $t_1 = 0°C = 273\,K$ $\quad I = konst$
$t_2 = 1200°C = 1473\,K$ $\quad U_2 = x\,U_1$
$\alpha = 0{,}04\,K^{-1}$

$$I = \frac{U}{R} \rightarrow \frac{U_1}{R_1} = \frac{U_2}{R_2}$$

$$x = \frac{U_2}{U_1} = \frac{R_2}{R_1}$$

$$R_2 = R_1 \cdot (1 + \alpha \Delta t)$$

$$x = \frac{U_2}{U_1} = \frac{R_1 (1 + \alpha \Delta t)}{R_1} = 1 + \alpha \Delta t = 1 + 0{,}04 \cdot (1473 - 273) = 49$$

$$U_2 = 49\,U_1$$

[illegible]