

G 36: 36.1

$$R = 1,364 \Omega$$

36.2

$$R = 1,233 \Omega$$

36.3

$$R = 8,77 \Omega$$

36.4

$$R = 29,54 \Omega$$

36.5

$$R_{A'A} = R_{B'B} = R_{C'C} = \frac{1}{2} R$$

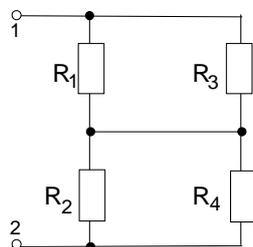
$$R_{BC} = \frac{5}{12} R$$

G 37: 37.1

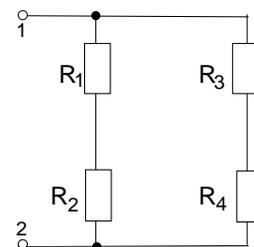
Brücke abgeglichen

⇒ Punkt a und b haben gleiches Potential und dürfen damit direkt verbunden werden ($R_M=0$).

⇒ Da der Brückenweig stromlos ist, kann R_M entfernt werden ($R_M=\infty$).

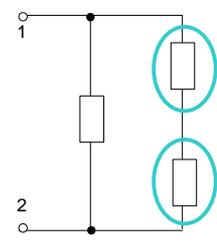
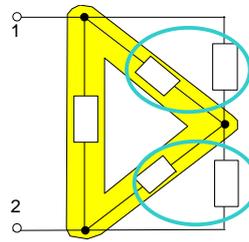
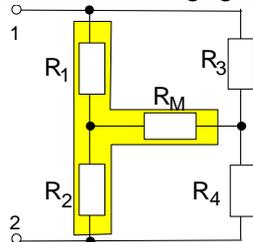


$$R_e = (R_1 \parallel R_2) + (R_3 \parallel R_4)$$



$$R_e = (R_1 + R_2) \parallel (R_3 + R_4)$$

37.2 Brücke NICHT abgeglichen



37.3

$$R_i = (R_1 \parallel R_2) + (R_3 \parallel R_4)$$

$$U_0 = U_q \left(\frac{R_4}{R_3 + R_4} - \frac{R_2}{R_1 + R_2} \right)$$

G 38:

$$U_1 = 0V$$

$$U_x = 0V$$

$$I_1 = 0A$$

$$I = 1A$$

G 39:

$$\frac{1}{R_i} = \sum_{k=1}^n \frac{1}{R_k}$$

$$I_k = \sum_{k=1}^n \frac{U_k}{R_k}$$

$$U_a = \frac{\sum_{k=1}^n \frac{U_k}{R_k}}{\sum_{k=1}^n \frac{1}{R_k}}$$

G 40:

40.1 $U_{AB} = 132,2V$

$I_{AB} = 0A$

40.2 $U_{AB} = 0V$

$I_{AB} = 152,25A$

40.3 $U_{AB} = 102,5V$

$I_{AB} = 34,18A$

40.4 Leistungsanpassung $R_{AB} = R_i = 0,868 \Omega$ $I_{AB} = 76,0A$ $P = 5,02kW$