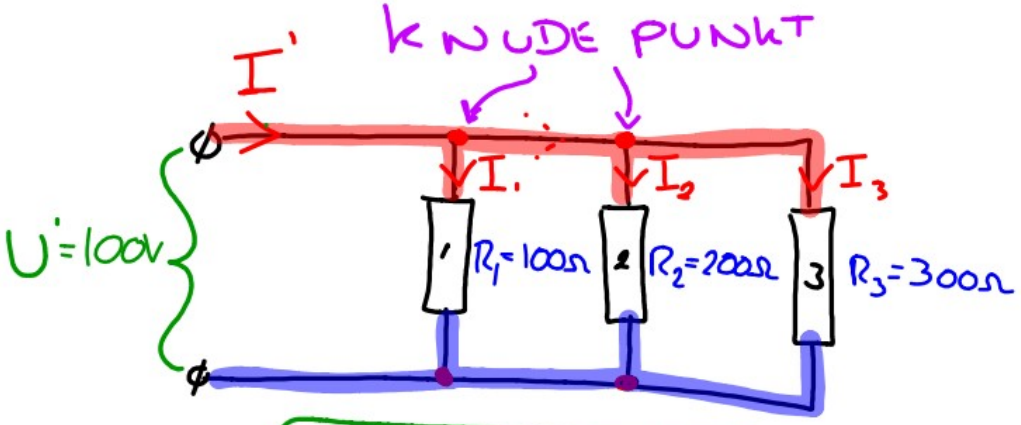
PARALLEL KREDS



$$U' = U_1 = U_2 = U_3$$

	U	I	R
1	100V	1 A	100Ω
2	100V	500mA	200Ω
3	100V	333,33mA	300Ω
Tot	100V	1,83A	54,55Ω

$$I_1 = \frac{U_1}{R_1} = \frac{100}{100} = 1A$$

$$I_2 = \frac{U_2}{R_2} = \frac{100}{200} = 500mA$$

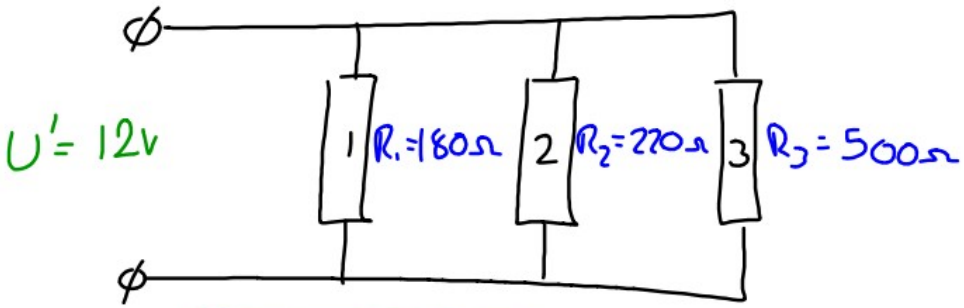
$$I_3 = \frac{U_3}{R_3} = \frac{100}{300} = 333,\overline{33}mA$$

$$I' = I_1 + I_2 + I_3 = 1 + 0,5 + 0,33333 = 1,83A$$

$$R' = \frac{U'}{I'} = \frac{100}{1,83} = 54,55\Omega$$

$$R' = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}} \Rightarrow R' = \left(R_1^{-1} + R_2^{-1} + R_3^{-1}\right)^{-1}$$

DEN RECI BROKKE REGNE METODE



$$U' = U_1 = U_2 = U_3$$

	U	I	R
1			180Ω
2			220Ω
3			500Ω
Tot	12V		82,64Ω

$$I_1 = \frac{U_1}{R_1} =$$

$$I_2 = \frac{U_2}{R_2} =$$

$$I_3 = \frac{U_3}{R_3} =$$

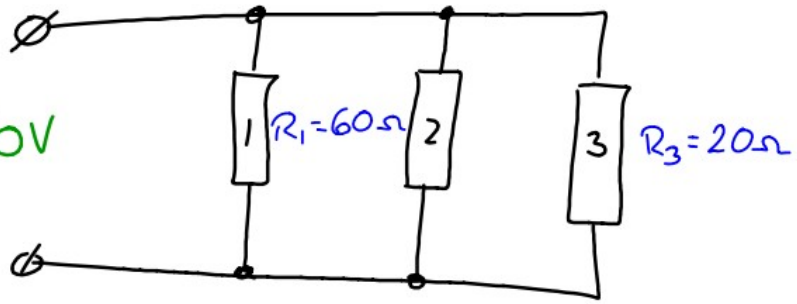
$$I' = I_1 + I_2 + I_3 =$$

$$R' = \frac{U'}{I'} =$$

$$R' = \left(R_1^{-1} + R_2^{-1} + R_3^{-1}\right)^{-1} =$$

ELLER

TAVLE OPGAVE



$R' = 11{,}5\,\Omega$

$U' = U_1 = U_2 = U_3$

	U	I	R
1		833,33mA	60Ω
2		1,04A	49,29Ω
3		2,5A	20Ω
Tot	50V	4,35A	11,5Ω

① $I' = \frac{U'}{R'} = \frac{50}{11{,}5} = \underline{4{,}35A}$

② $I_1 = \frac{U_1}{R_1} = \frac{50}{60} = \underline{833{,}33mA}$

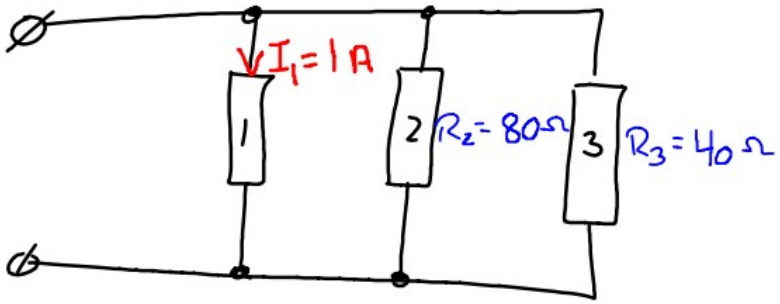
③ $I_3 = \frac{U_3}{I_3} = \frac{50}{20} = \underline{2{,}5A}$

④ $I_2 = I' - I_1 - I_3 = 4{,}35 - 0{,}83 - 2{,}5 = \underline{1{,}01A}$

⑤ $R_2 = \frac{U_2}{I_2} = \frac{50}{1{,}01} = \underline{49{,}29\,\Omega}$

⑥ $R' = \left(R_1^{-1} + R_2^{-1} + R_3^{-1}\right)^{-1} = \left(60^{-1} + 49{,}29^{-1} + 20^{-1}\right)^{-1} = \underline{11{,}5\,\Omega}$

TAVLE OPGAVE



$R' = 12{,}9\,\Omega$

$U' = U_1 = U_2 = U_3$

	U	I	R
1	24,99V	1 A	24,99Ω
2	-11-		80Ω
3	-11-		40Ω
Tot	-11-		12,9Ω

SERIE

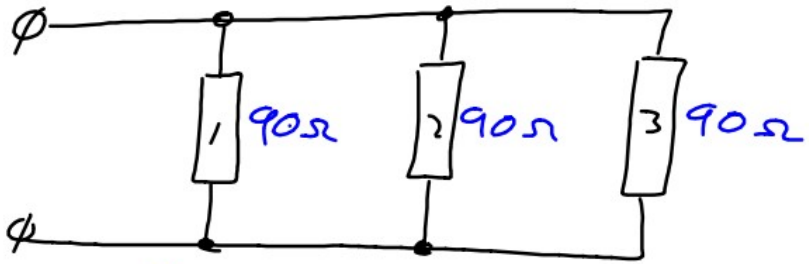
$$R' = R_1 + R_2 + R_3$$

$$R_1 = R' - R_2 - R_3$$

$$R' = \left(R_1^{-1} + R_2^{-1} + R_3^{-1}\right)^{-1}$$

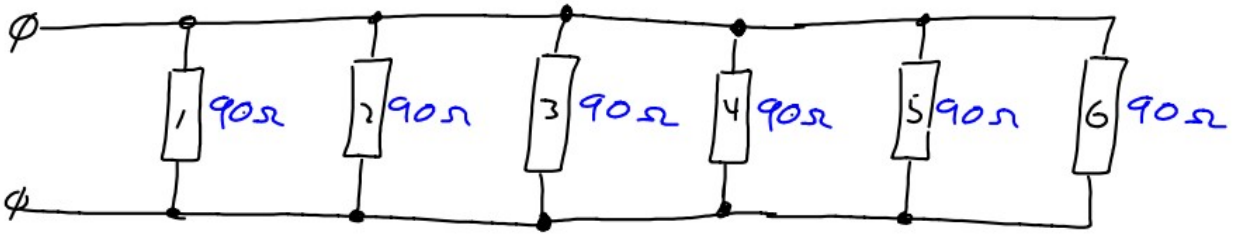
$$R_1 = \left(R'^{-1} - R_2^{-1} - R_3^{-1}\right)^{-1}$$

GULD KORN / COWBOY TRICK



$$R' = \left(R_1^{-1} + R_2^{-1} + R_3^{-1}\right)^{-1}$$

VED ENS STØRRELS → $\frac{R_x}{\text{ANTAL}}$ $R' = \frac{90}{3} = \underline{30\Omega}$



$$R' = \frac{90}{6} = \underline{15\Omega}$$