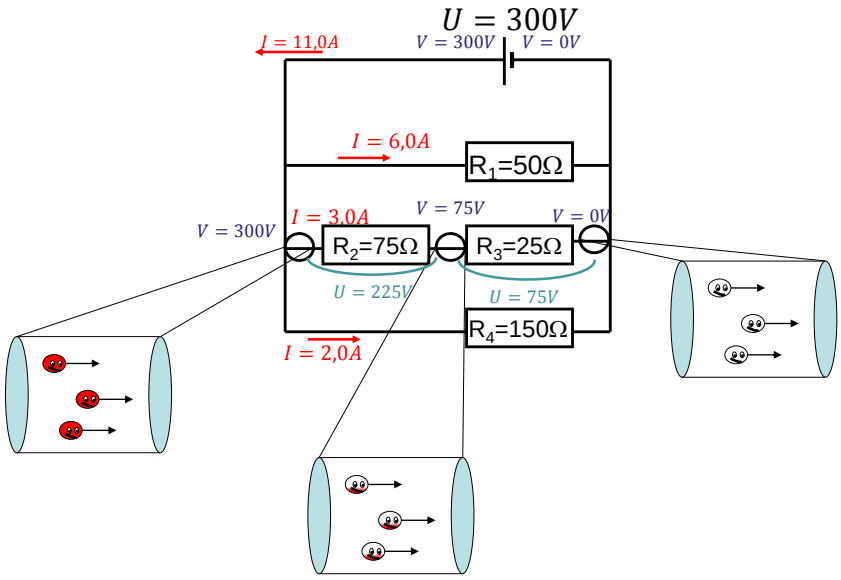
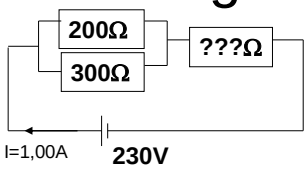
De gemengde schakeling



De gemengde schakeling



	Rs	R1	R2	R3
U(V)	230	120	120	110
I(A)	1,00	0,600	0,400	1,00
R(Ω)	230	200	300	110

$R_S = \frac{230}{1{,}00} = 230\Omega$ $\quad \frac{1}{Rs_{1,2}} = \frac{1}{R_1} + \frac{1}{R_2} = \frac{1}{200} + \frac{1}{300} = \frac{5}{600} \Rightarrow Rs_{1,2} = 120\Omega$

$R_S = Rs_{1,2} + R_3$ $\quad 230\Omega = 120\Omega + R_3$ $\quad R_3 = 110\Omega$

$I_S = 1{,}00A \Rightarrow I_3 = 1{,}00A$

$U_3 = I_3.R_3 = 1{,}00A.110\Omega = 110V$ $\quad U_S = U_{1/2} + U_3 \Rightarrow U_{1/2} = 120V$

$I_1 = \frac{120}{200} = 0{,}600A$

$I_2 = \frac{120}{300} = 0{,}400A$