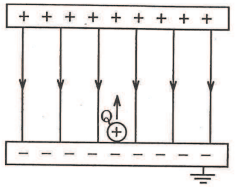
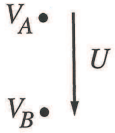
Potential, spänning och ström

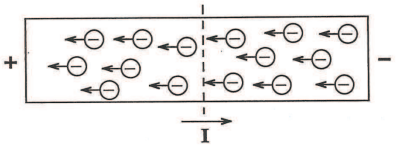


Laddning: Q
Energi: W

Potential: $V = \frac{W}{Q}$



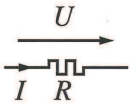
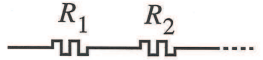
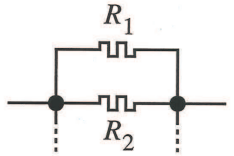
Spänning: $U = V_A - V_B$



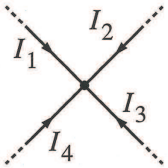
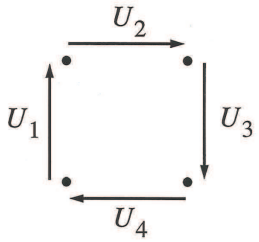
Transporterad laddning: Q
Motsvarande tid: T

Ström: $I = \frac{Q}{T}$

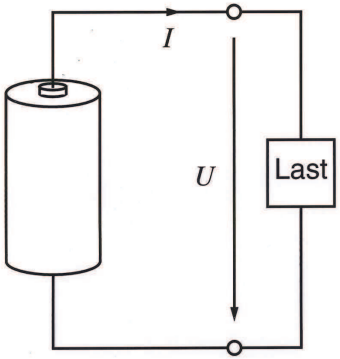
Resistans

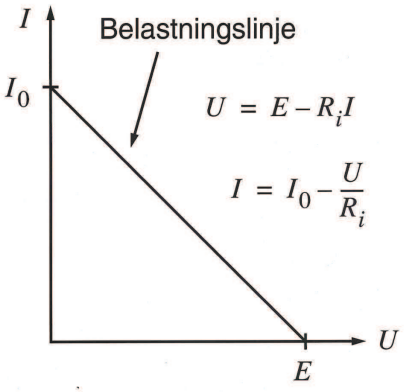
Definition	Seriekoppling	Parallellkoppling
		
$R = \frac{U}{I}$	$R = \sum_k R_k$	$\frac{1}{R} = \sum_k \frac{1}{R_k}$

Kirchhoffs lagar

Strömlagen	Spänningslagen
	
$\sum_k I_k = 0$	$\sum_k U_k = 0$

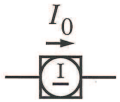
Batterimodell





Ideala källor

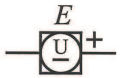
Ideal strömkälla



Levererar alltid strömmen I_0, oavsett hur den är belastad.

Inre resistans: ∞

Ideal spänningskälla



Levererar alltid spänningen E, oavsett hur den är belastad.

Inre resistans: 0

Batterimodell