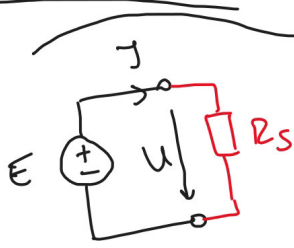


laborator 1 electronica I:

Sursa de tensiune:

ideală



$V_{out} = \text{constant}$  indiferent de  $R_S$

$R_S = 0 \rightarrow \infty$  (ideal)

ex 1:  $E = 10V$

$R_S = 1k\Omega$

$V_{out} = 10V$

$I_{out} = \frac{V_{out}}{R_S} =$

$= \frac{10V}{1000\Omega} = 0.01A = 10mA$

ex 2:

$R_S = 1\Omega$

$V_{out} = 10V$

$I_{out} = \frac{10V}{1\Omega} = 10A$

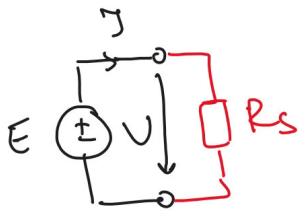
ex 3

$R_S = 0.1\Omega$

$V_{out} = 10V$

$I_{out} = \frac{10V}{0.1\Omega} = 100A$

REALĂ:



ex: sursă reală

$E = 10V = V_{out}$

$I_{max} = 1A$

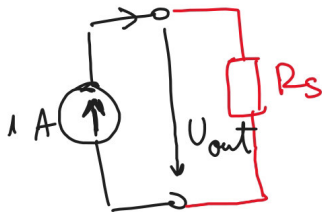
$R_S = 1k\Omega$  ;  $I_{out}^{ideal} = 10mA$  ;  $V_{out} = 10V$

$R_S = 1\Omega$  ;  $I_{out}^{ideal} = 10A$

$I_{out}^{real} = 1A = I_{max}$  ;  $V_{out} = 1V$

Sursa de curent:

ideal:  $I_{out} = \text{const.}$  ;  $V_{out} = R_S \cdot I_{out}$   
 $I_{out} \rightarrow \infty$



ex:  $R_S = 1\Omega$  ;  $I_{out} = 1A$  ;  $V_{out} = 1V$

$R_S = 1k\Omega$  ;  $I_{out} = 1A$  ;  $V_{out} = 1000V$

Real:  $V_{out} \rightarrow \text{limitat}$

$I_{out} = 1A$   
 $V_{out}^{max} = 10V$

$R_S = 1\Omega$  ;  $I_{out} = 1A$  ;  $V_{out} = 1V$

$R_S = 10k\Omega$  ;  $V_{out}^{ideal} = 10000V$

$V_{out}^{real} = 10V = V_{out}^{max}$

$I_{out} = \frac{10V}{10k\Omega} = \frac{10}{10000} = 1mA$