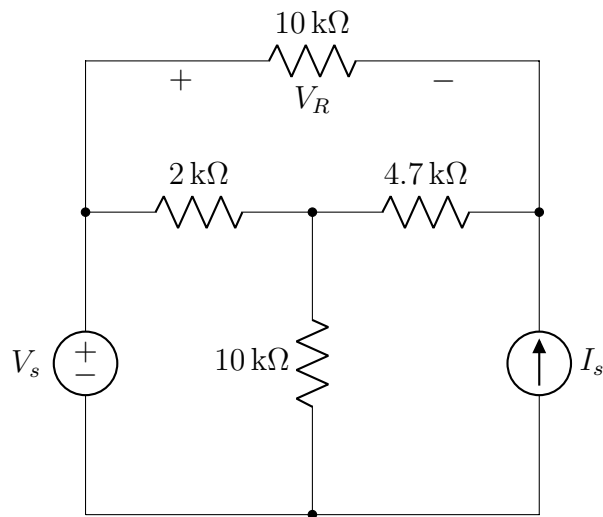


## Lab assignment 03

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## Nodal analysis

### Exercise 1 - Circuit



Simulation ( $V_s = 5\text{ V}$ ,  $I_s = 4\text{ mA}$ ):

- Model this circuit with a simulational tool.
- Determine the current flowing through the voltage source, and the voltage across the current source.
- Determine the limit values you will set on the DC power supply for the 2 sources.
- Determine  $V_R$ .

Analytical solution ( $V_s = 5\text{ V}$ ,  $I_s = 4\text{ mA}$ ):

- Apply nodal analysis.
- Determine  $V_R$ .

Experiment ( $V_s = 5\text{ V}$ ,  $I_s = 4\text{ mA}$ ):

- Wire the circuit on the breadboard.
- Measure  $V_R$  with a multimeter.

Conclusions?