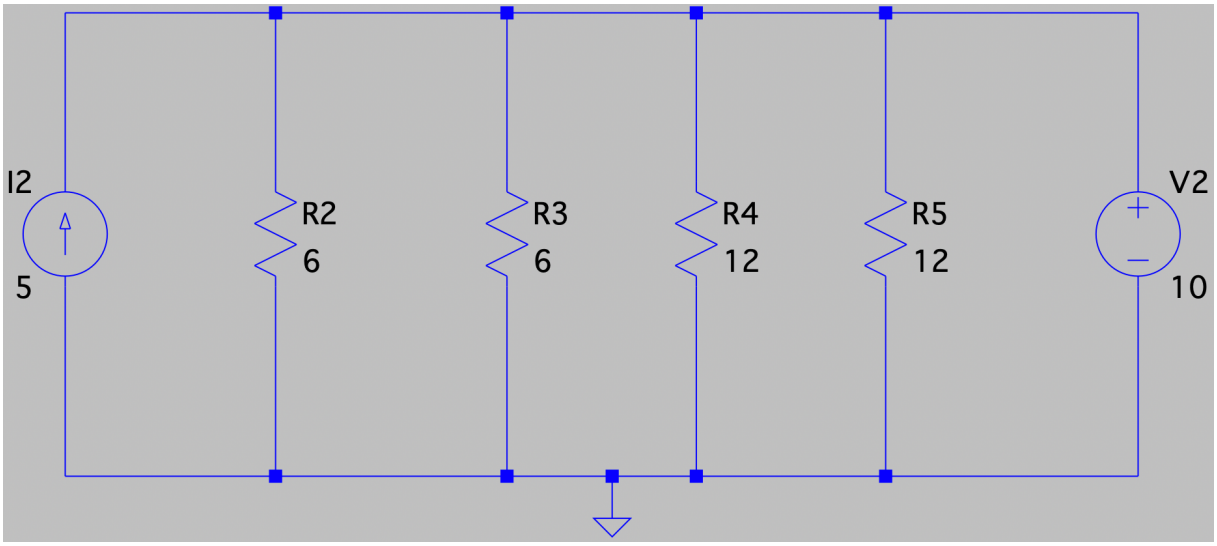
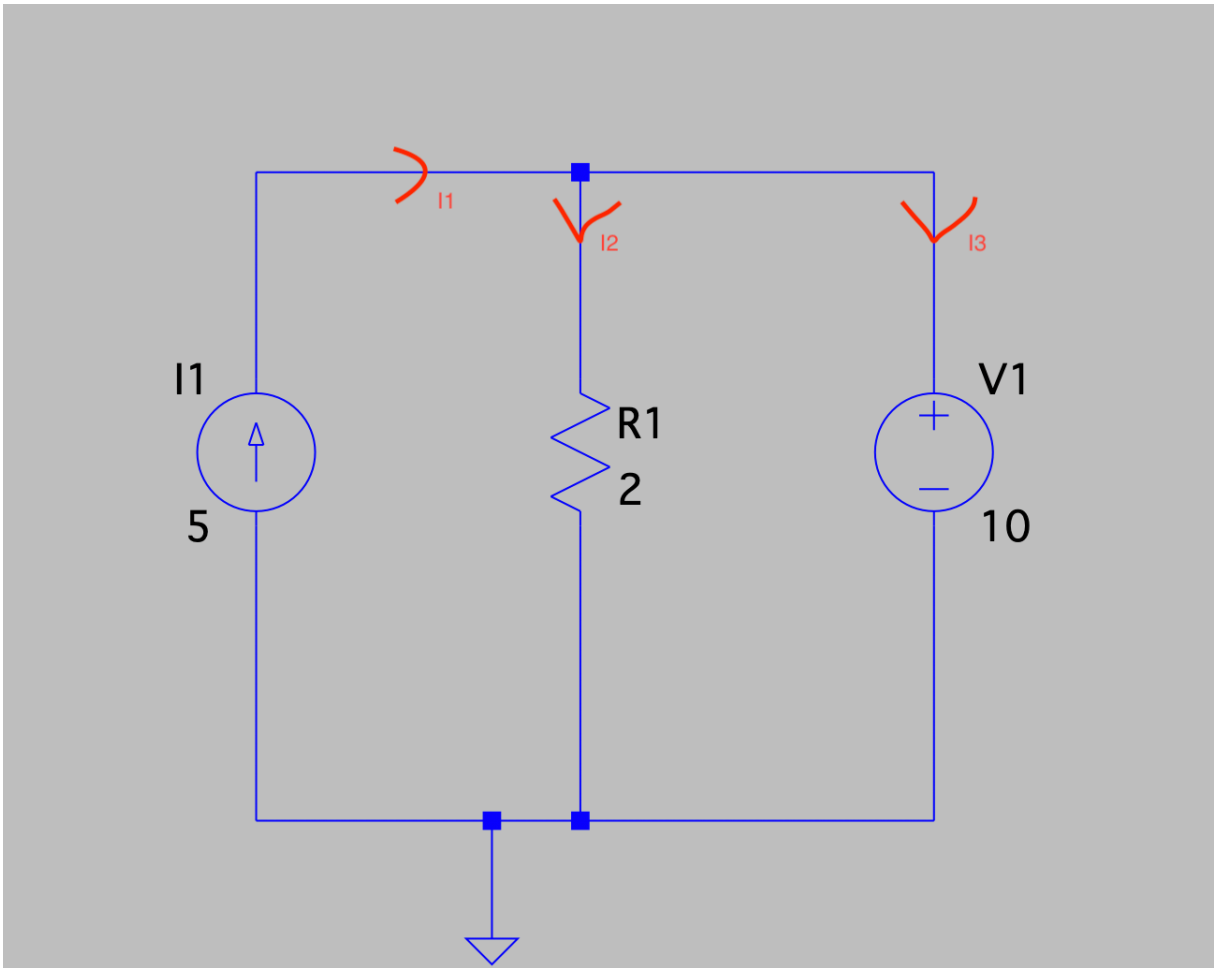
Travail 1 – circuit DC

Circuit de base



Circuit simplifié



Calcule des tensions

V = R*I
V_1 = 5*2 = 10V

Calcule des courants

I = $\frac{V}{R}$

I_1 = 5A

I_2 = $\frac{10}{2}$ = 5A

I_3 = 0

Pour que la sommes des courants soit égale à 0, I3 doit être égale à 0.

Calcule de puissance

P = V*I

P_{R1} = 10*5 = 50W

Calcule LTspice

```
   --- Expanded Deck Component Count ---
I's 1
R's 1
V's 1
tot: 3


    --- Expanded Netlist ---
* /Users/sam/Documents/LTspice/Draft1.asc
r1 n001 0 2
v1 n001 0 10
i1 0 n001 5
.op
.end

Direct Newton iteration for .op point succeeded.
Operating Bias Point Solution:
V(n001)                 10   voltage
I(I1)                  5   device_current
I(R1)                  5   device_current
I(V1)                  0   device_current


Date: Sat Feb 13 10:11:51 2021
Total elapsed time: 0.005 seconds.

tnom = 27
temp = 27
method = trap
totiter = 3
traniter = 0
tranpoints = 0
accept = 0
rejected = 0
matrix size = 2
fillins = 0
solver = Normal
Matrix Compiler1:       2 opcodes
Matrix Compiler2:       9 opcodes
```