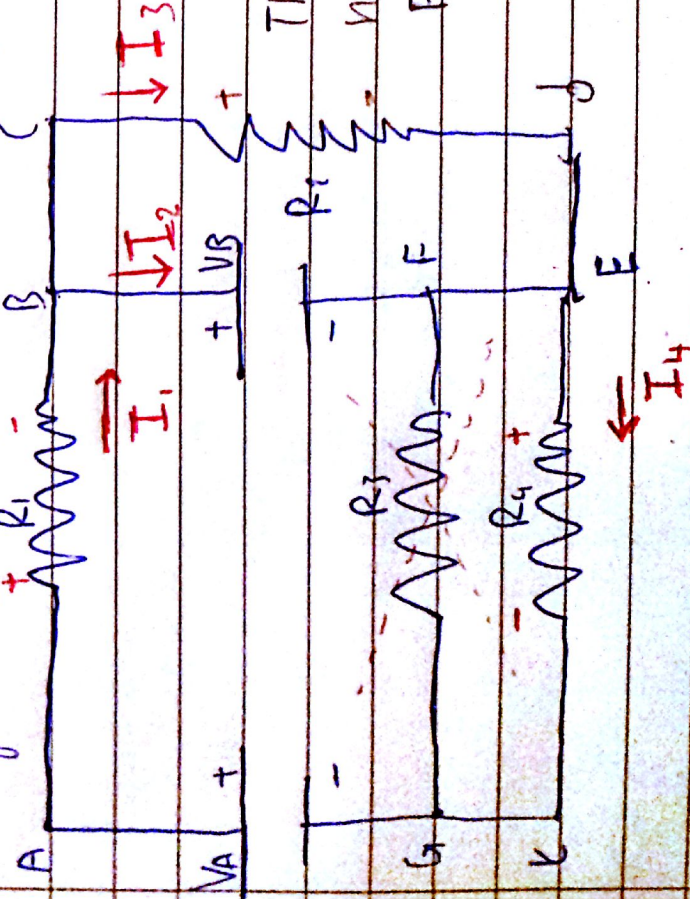


- Current can pass through a source.
- The potential difference of battery VA is bigger than that of battery VB. So, because it is driven by higher potential the current can flow into the + terminal of battery VB.

Current sources always drive exactly their designated current no matter what. Shouldn't think of them in terms of having resistance or not. So the current in B will split. So:



ABOUT  $I_2$ :

The F-E "road" has

No resistance, whereas

F-G "road" has. So

$R_3$  is out.



About B:  $I_1 = I_2 + I_3$

About E:  $I_2 = I_1 = I_3 + I_4$

About I<sub>1</sub>:

It goes B-C-d-E

Then it can go to K or to F.

But it will not go to F because it cannot

go down to -.

The same for I<sub>2</sub>. It can't continue to d.

(from Kirchhoff's law)

About ABECA loop:

$$+20 - 5 = R_1 I_1 + R_4 I_1 \Rightarrow 15 = 3I_1 + 87I_1 \Rightarrow I_1 = +\frac{15}{90} = 1,5 \text{ mA}$$

About ~~ABE~~ ACDKA:

~~BECA~~ ~~BECA~~ ~~BECA~~ ~~BECA~~

$$20 = I_1 R_1 + I_3 R_2 + I_1 R_4 \Rightarrow$$

$$20 = 15 + 9I_3 \Rightarrow I_3 = \frac{5}{9} \text{ mA}$$

$$S_2 \quad I_2 = \frac{15}{10} - \frac{5}{9} \approx 1,5 - 0,55 = 0,95 \text{ mA}$$

$S_2$  the current for the resistances will be:

$R_1$  .... 1,5 mA

$R_2$  .... 0,55 mA

$R_4$  .... 1,5 mA