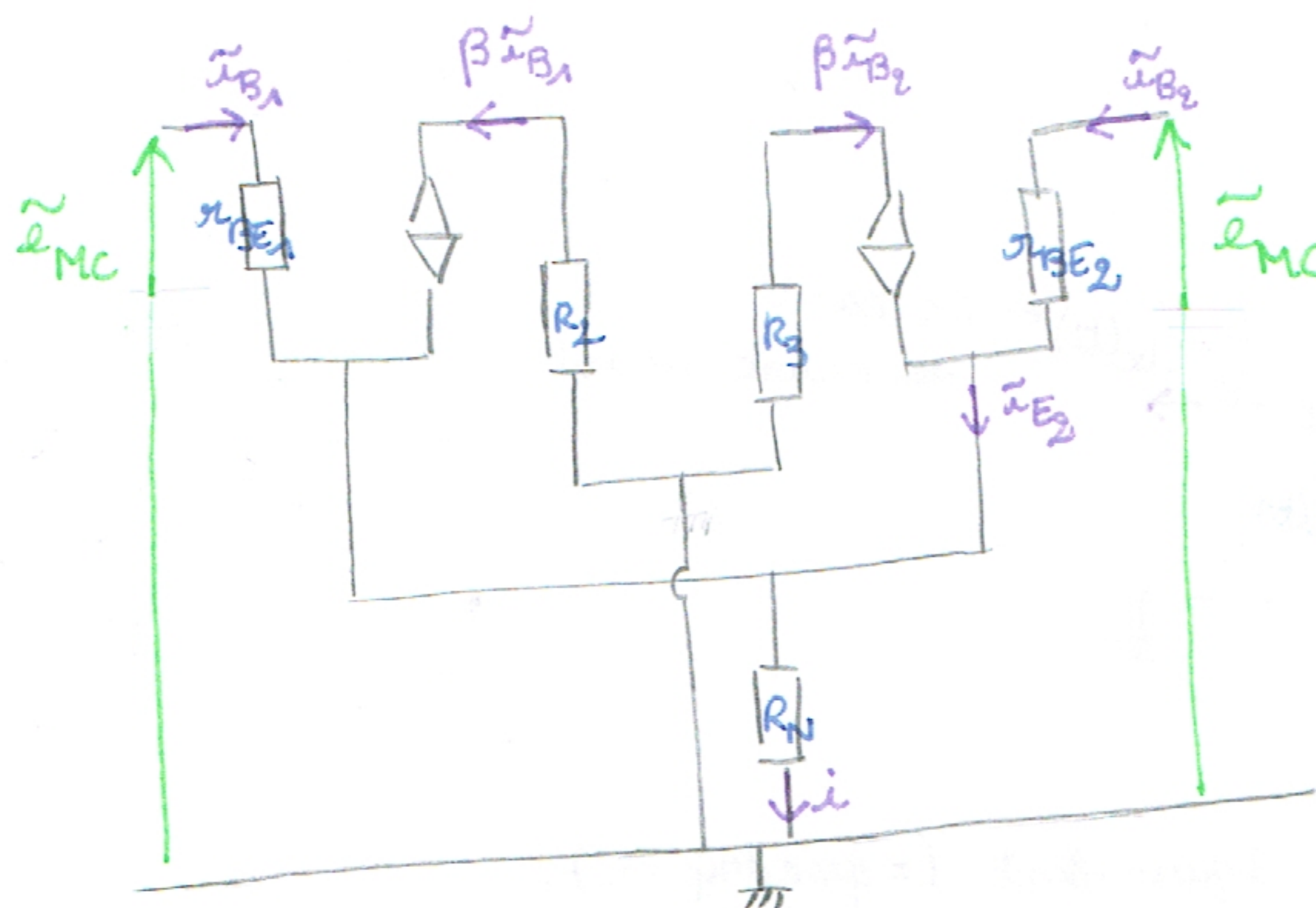


Partie 4: Étude du mode commun

* mode commun: $\tilde{e}_d = 0$



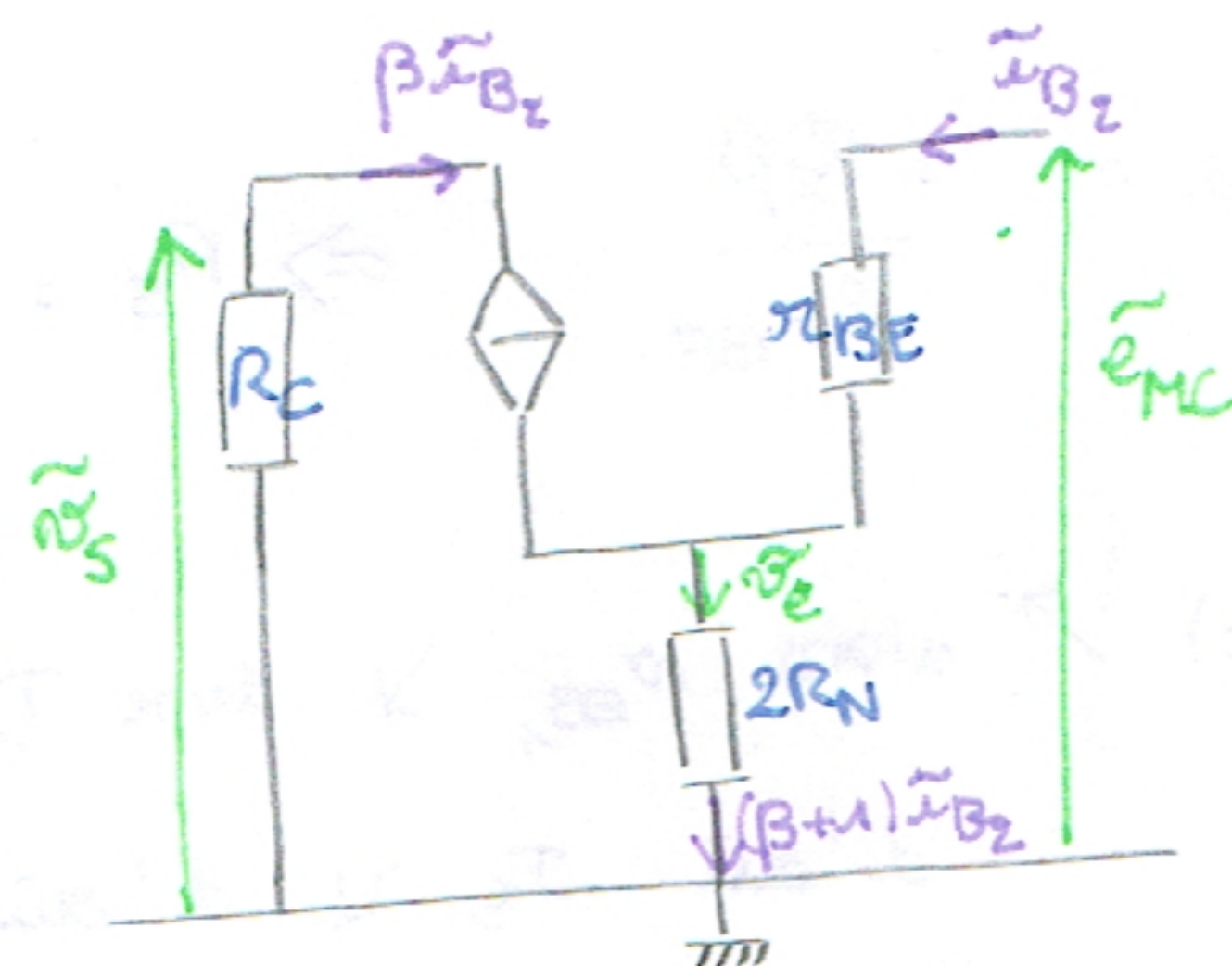
$$* \tilde{i} = (\beta+1)\tilde{i}_{B1} + (\beta+1)\tilde{i}_{B2}$$

$$= (\beta+1)(\tilde{i}_{B1} + \tilde{i}_{B2}) \quad \text{or} \quad \tilde{i}_{B1} = \tilde{i}_{B2}$$

$$= 2(\beta+1)\tilde{i}_{B2} \Rightarrow \tilde{i}_{B2} = \frac{\tilde{i}}{2(\beta+1)}$$

$$* \tilde{v}_S = -R_3 \beta \tilde{i}_{B2}$$

\Rightarrow demi-schéma



$$* \tilde{v}_S = -\beta R_C \tilde{i}_{B2}$$

$$* \tilde{e}_{MC} = r_{BE} \tilde{i}_{B2} + (\beta+1) 2R_N \tilde{i}_{B2}$$

$$\Rightarrow A_{MC} = \frac{-\beta R_C}{r_{BE} + 2(\beta+1)R_N}$$

$$\text{or } r_{BE} \ll R_N \Rightarrow A_{MC} = \frac{-\beta R_C}{2(\beta+1)R_N} = \frac{-R_C}{2R_N}$$