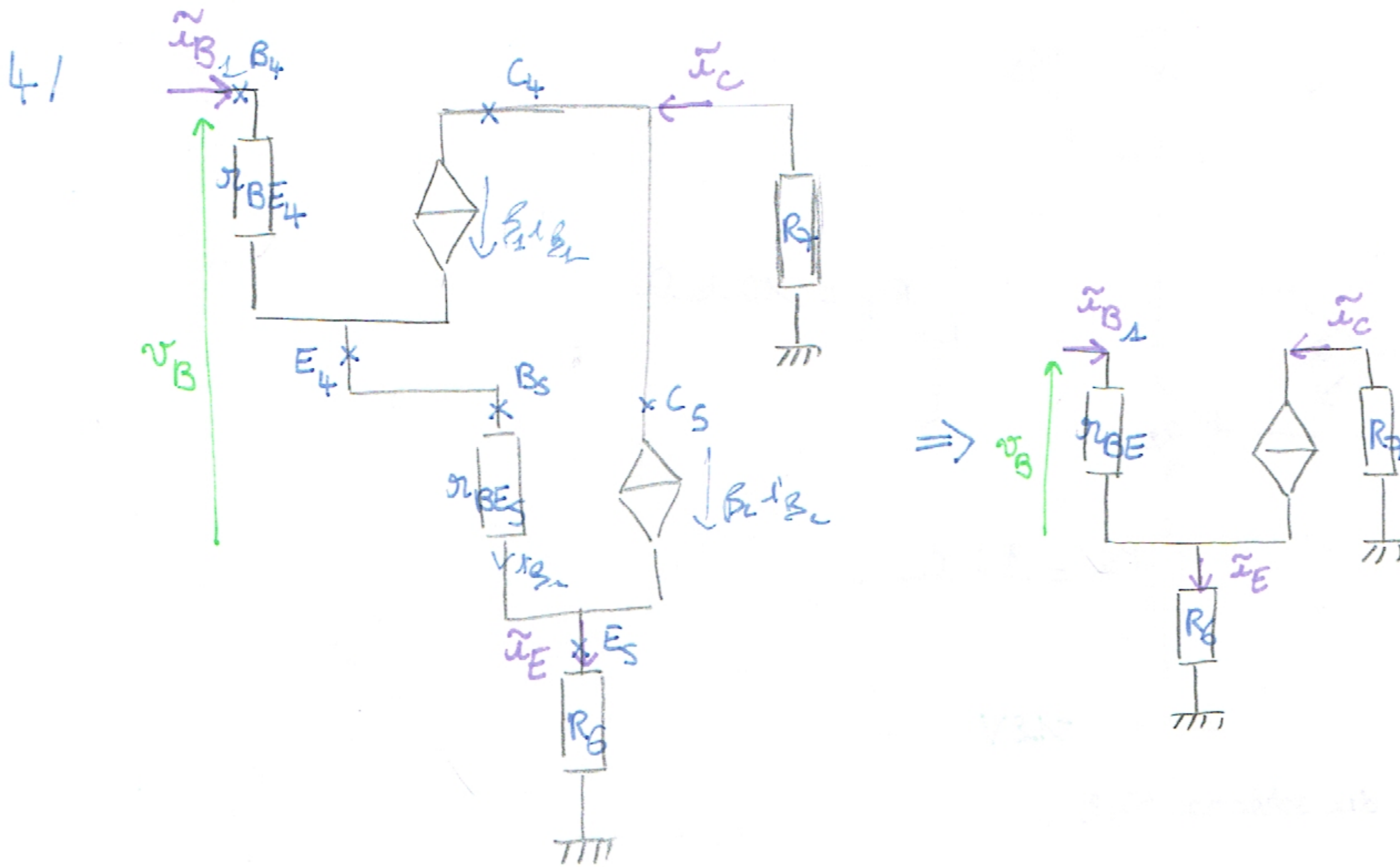TP3, suite

Partie 2, suite

4/

$$* \quad \tilde{v_B} = r_{BE_1} \tilde{i}_{B_1} + r_{BE_2}(\beta_1+1)\tilde{i}_{B_1} = r_{BE}\tilde{i}_{B_1}$$

$$\Rightarrow r_{BE} = r_{BE_1} + (\beta_1+1)r_{BE_2}$$

$$* \quad i_C = \beta_1 \tilde{i}_{B_1} + \beta_2 \tilde{i}_{B_2} = \beta_1\tilde{i}_{B_1} + \beta_2\beta_1\tilde{i}_{B_1} = \beta\tilde{i}_{B_1}$$

$$\Rightarrow \beta = \beta_1 + \beta_1\beta_2$$
$$\approx \beta_1\beta_2$$

5/ $\quad R_{in} = \dfrac{v_B}{i_B} = r_{BE} + (\beta+1)R_6$

$$= r_{BE_1} + r_{BE_2}(\beta_1+1) + (\beta_1\beta_2+1)R_6$$