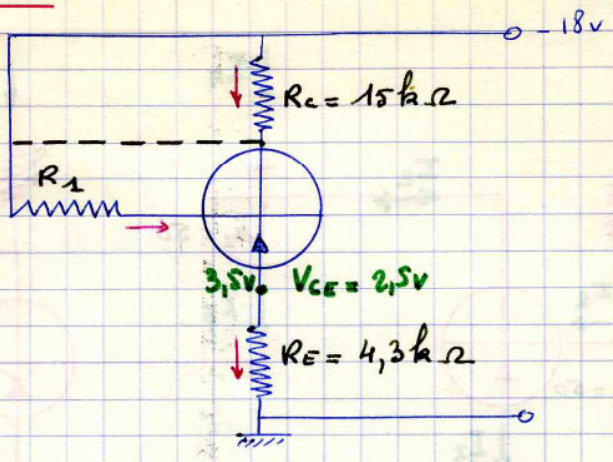
n°10 p. 270.



a) $R'_1 = \dfrac{U_{batt} - U_{BM}}{I_B} = \dfrac{18,1 - 3,6}{10} = 1,44\,M\Omega$.

b) $R''_1 = \dfrac{U_{CM} - U_{BM}}{I_B} = \dfrac{6 - 3,6}{0,010} = \dfrac{2,4}{0,01} = 240\,k\Omega$.

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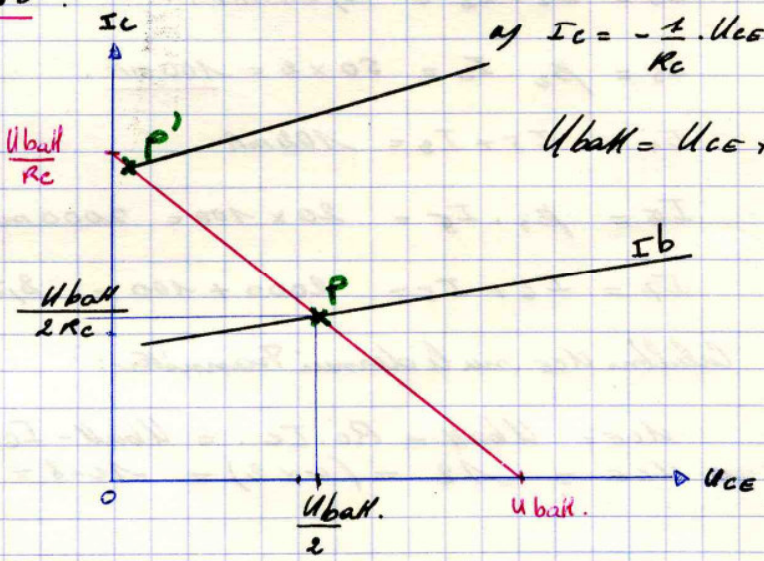
n°11 p. 270.

a)



a) $I_C = -\dfrac{1}{R_c} \cdot U_{CE} + \dfrac{U_{batt}}{R_c}$

$U_{batt} = U_{CE} + R_c \cdot I_C$ (1)

b) $I_C = \beta \cdot I_B + I_{CE0} \Rightarrow I_C \# \beta \cdot I_B$.

$I_B = \dfrac{U_{batt} - U_{BE}}{R_p} \Rightarrow I_B \# \dfrac{U_{batt}}{R_p}$.

c) D'après l'équation (1) $U_{batt} = \dfrac{U_{batt}}{2} + R_c \cdot \beta \cdot \dfrac{U_{batt}}{R_p}$

$\dfrac{U_{batt}}{2} = U_{batt} \cdot \dfrac{R_c \cdot \beta}{R_p} \Rightarrow R_p = 2\beta R_c$.

d) Transistor saturé : (point de repos en P')

I_C double $\Rightarrow$ I_B double $\Rightarrow$ R_p moitié. $R_p = \beta \cdot R_c$.