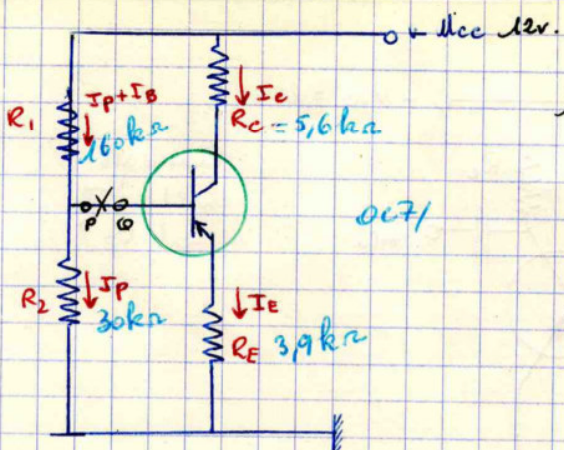


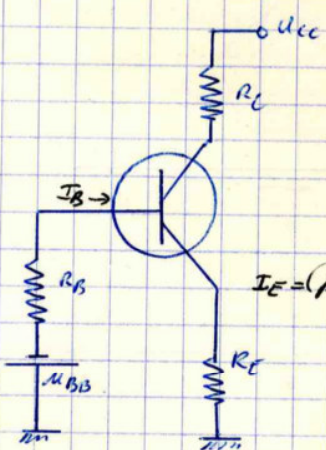
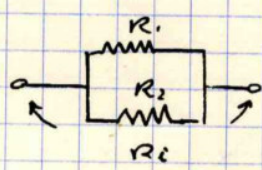
1.4.2.



$$U_{BB} = \frac{U_{CC} \cdot R_2}{R_1 + R_2}$$

$$= \frac{12 \cdot 30}{190} = \frac{360}{190} \approx 1,9V$$

$$R_i = \frac{R_1 \cdot R_2}{R_1 + R_2} = \frac{1800}{190} = 9,5k\Omega$$

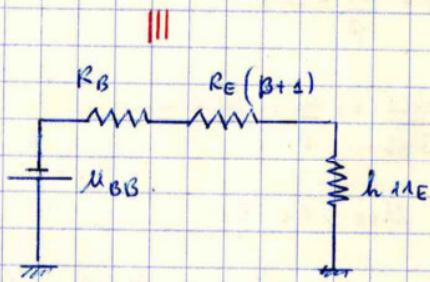


$$I_E = (h_{21E} + 1) I_B$$

$$U_{BB} = R_B \cdot I_B + U_{BE} + R_E \cdot I_E$$

$$U_{BB} = R_B I_B + U_{BE} + R_E (h_{21E} + 1) I_B$$

$$U_{BB} = I_B (R_{BB} + R_E (\beta + 1)) + U_{BE}$$



$$I_{Br} = \frac{U_{BB} - U_{BE}}{R_{BB} + R_E (h_{21E} + 1)}$$

$$h_{21E} = 58 \text{ (from } U_{CE} = 4,5V)$$

$$R_E (h_{21E} + 1) = 3,9 \times 59 = 230k\Omega$$

$$I_{Br} \approx \frac{1,9}{255,2} = 7,5 \mu A$$