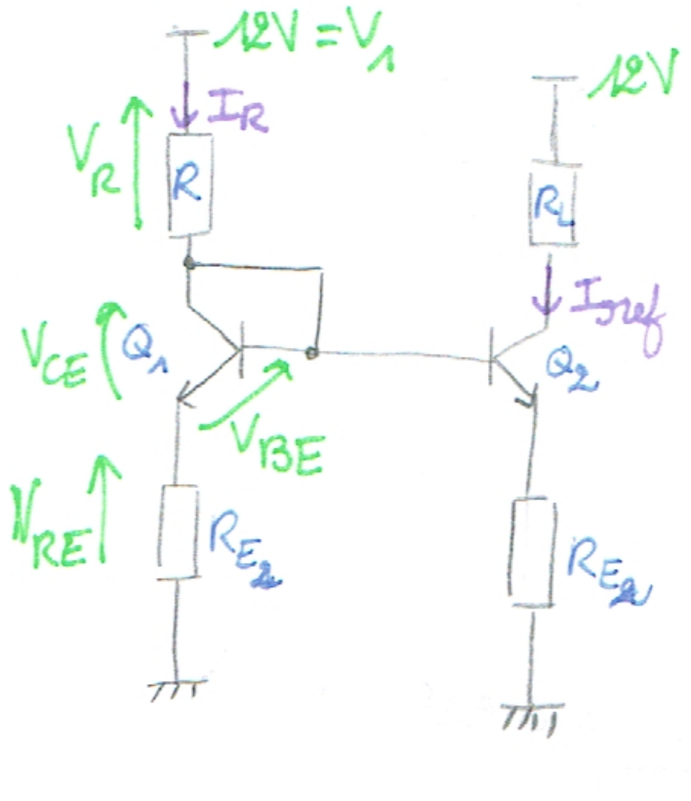
## 3.5 Le miroir de courant.




$R_{E_1} = R_{E_2} = R_E = 3500\ \Omega$.

$Q_1 = Q_2$

$I_{ref} = 1\,mA$.

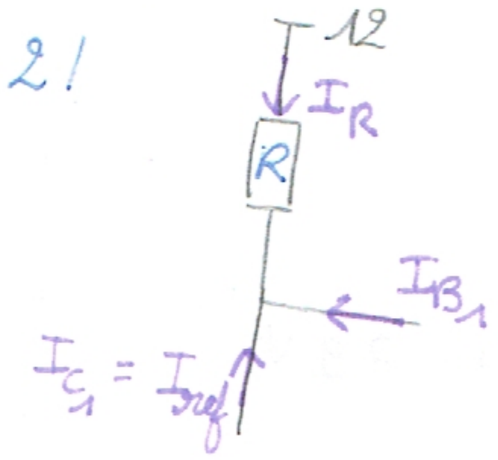
1/ $V_{B_1}$ ? $V_{B_2}$ ?

on sait que $Q_1 = Q_2$ et $R_{E_1} = R_{E_2}$ donc $V_{B_1} = V_{B_2}$.

donc $I_{B_1} = I_{B_2}$

donc $I_{C_1} = I_{C_2} = I_{ref}$.

2/




$I_R = I_{ref} + I_{B_1}$

Si $\beta = 100$ alors $I_{B_1} = \dfrac{I_{ref}}{100}$

$\Rightarrow I_R = I_{ref} + \dfrac{I_{ref}}{100} = 1{,}01\, I_{ref} \approx I_{ref}$.

3/ $I_R = I_{ref} = 1\,mA$.

$V_R = V_1 - V_{BE} - V_{RE} = 12 - 0{,}6 - R_{E_1} \times I_{ref}$

$= 7{,}9\,V$

$R = \dfrac{V_R}{I_R} = 7900\ \Omega$.