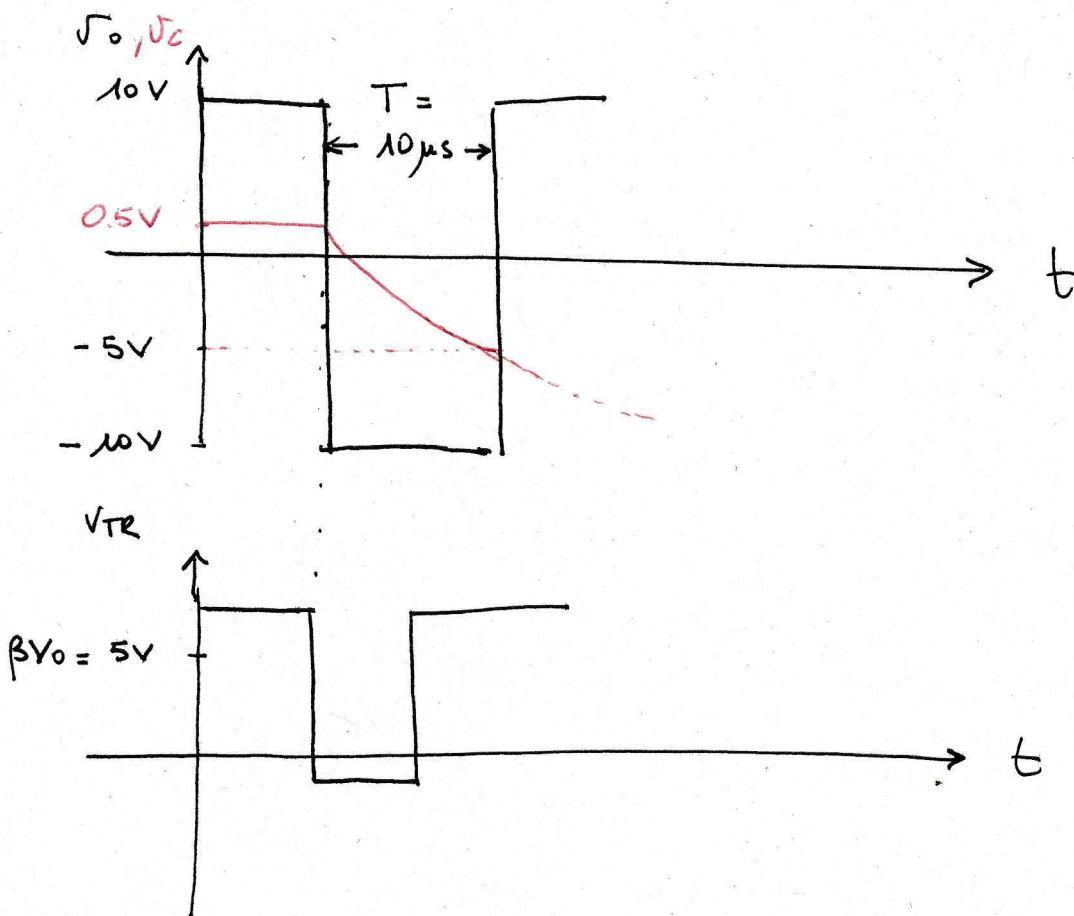
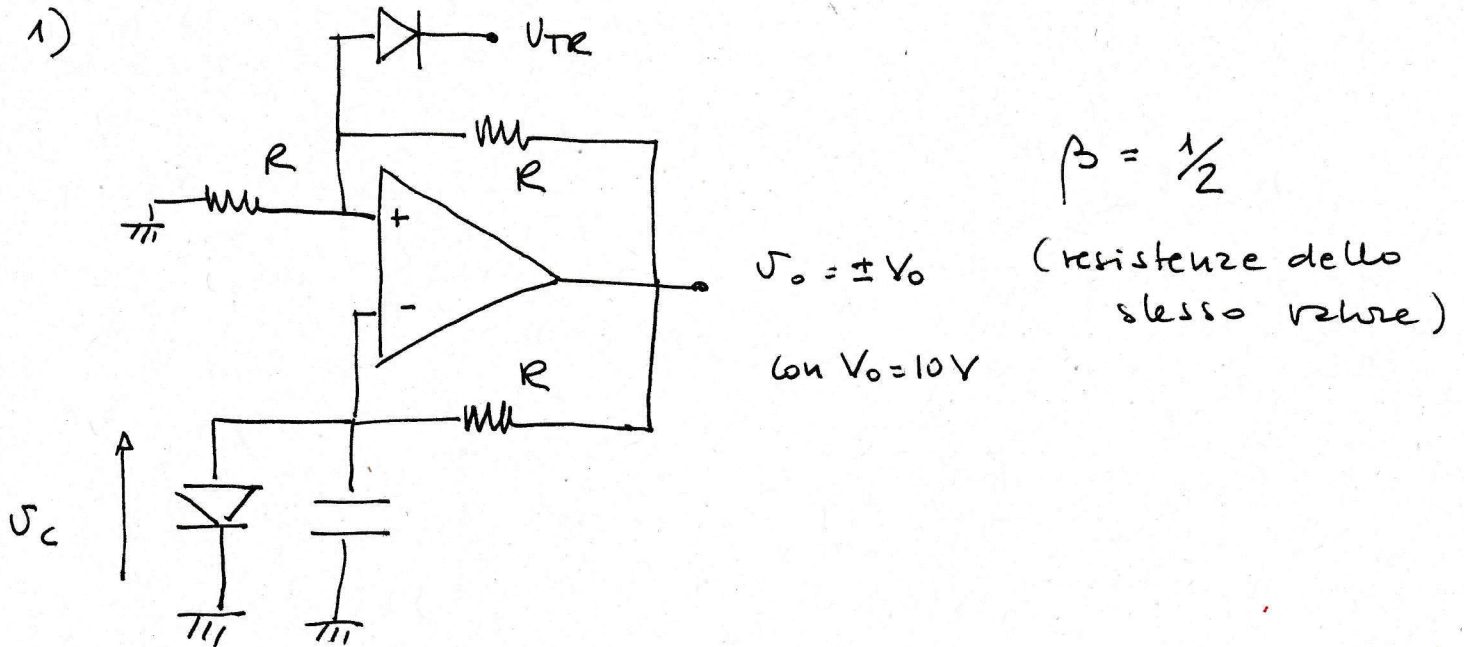




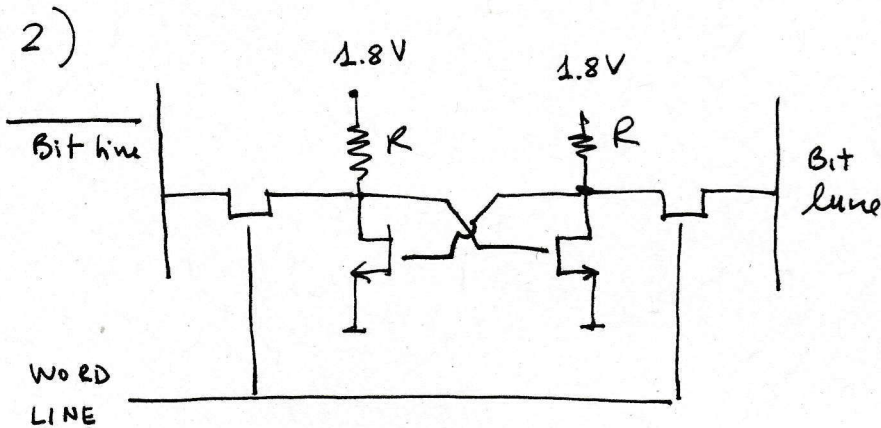
$$T = RC \ln \frac{(1 + \frac{V_x}{V_o})}{1 - \beta} = R \cdot 10^{-9} \cdot \ln 2.1$$

$C = 10^{-9} F$   
 $V_o = 10V$   
 $V_x = 0.5V$   
 $\beta = \frac{1}{2}$

quindi, per  $T = 10 \mu s$

②

$$R = \frac{10^{-5}}{10^{-9} \cdot \frac{1.34}{2.1}} = \frac{1.34}{2.1} \cdot 10^4 \Omega = 13.4 \text{ k}\Omega$$



L'inverter con uscita a livello basso dissipa potenza statica.

Per avere  $P_D \leq 1 \mu W$ , la corrente che scorre nell'inverter in questione,  $I$ , deve essere

$$I \leq \frac{1 \mu W}{1.8 V} \approx 0.55 \text{ nA}$$

$$\Rightarrow I \leq \frac{1.8 - 0.2}{R} \Rightarrow R \geq \frac{1.8 - 0.2}{0.55 \cdot 10^{-9}} \Omega$$



$$R \geq 2.909 \text{ G}\Omega$$