2 АУДИТОРНЕ ВЈЕЖБЕ

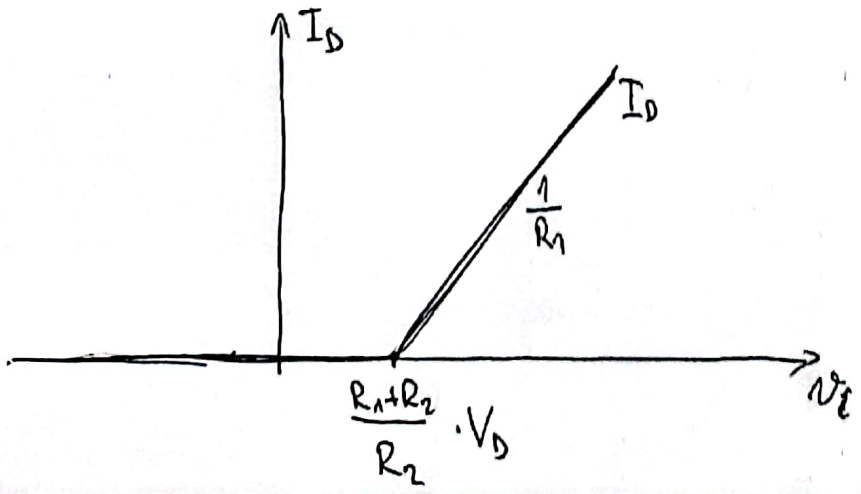
3 АУДИТОРНЕ ВЈЕЖБЕ (С ТИМ ДА НИЈЕ ПОТРЕБНО НИКАКВО ПРИПАТОЗЕЊЕ)

1.

$$v_o = \frac{R_2}{R_1+R_2} v_i \quad \Rightarrow \quad v_i = \frac{R_1+R_2}{R_2} \cdot v_o$$

за $v_i > \frac{R_1+R_2}{R_2} \cdot V_D$: D води, $I_{R_1} = \frac{v_i - V_D}{R_1}$, $I_D = \frac{v_i - V_D}{R_1} - \frac{V_D}{R_2}$

за $v_i < \frac{R_1+R_2}{R_2} \cdot V_D$: D не води, $I_{R_1} = \frac{v_i}{R_1+R_2}$, $I_D = 0$



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A	B	Y
0	0	1
0	1	1
1	0	0
1	1	0

$Y = \overline{A}$

КОЛО СА T_2 НЕ ЗТИЧЕ НА Y.

A=0 ⇒ D_1 ON D_2 OFF Q_1 НЕ ВОДИ

A=1 ⇒ D_1 OFF D_1 ON Q_1 ВОДИ

$$I_{CS} = \frac{V_{CC} - V_{CES}}{R_C}$$

$$I_{BS} = \frac{I_{CS}}{\beta_{min}} = \frac{V_{CC} - V_{CES}}{\beta_{min} R_C}$$

$$I_B = \frac{V_{CC} - V_D - V_{BES}}{R_1}$$

$$F_S = \frac{I_B}{I_{BS}} \Rightarrow I_B = 3 I_{BS}$$

$$\frac{V_{CC} - V_D - V_{BES}}{R_1} = \frac{3(V_{CC} - V_{CES})}{\beta_{min} R_C}$$

$$R_C = \frac{3 R_1 (V_{CC} - V_{CES})}{\beta_{min} (V_{CC} - V_D - V_{BES})}$$

$$= 960\,\Omega$$