

1)

$$V_G = 0.007V \approx 0V$$

$$V_D = 4.763V$$

$$V_S = 2.488V$$

$$V_B = 6.981V$$

$$V_C = 9.225V$$

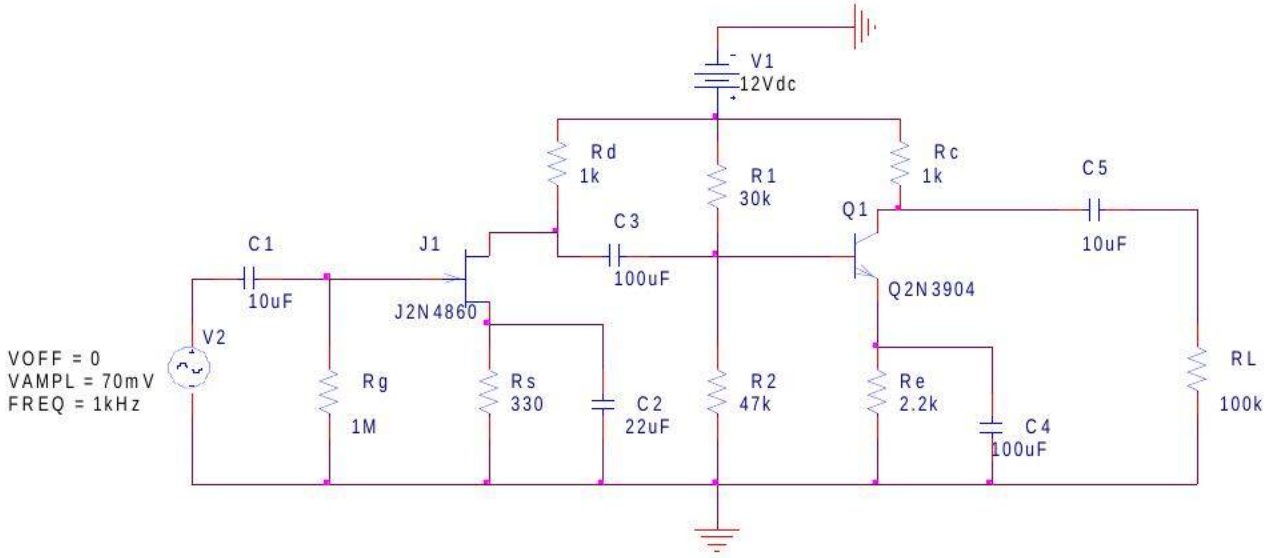
$$V_E = 6.175V$$

$$I_C = (V_{CC} - V_C) / R_C = (15 - 9.225) / 1k = 5.8mA$$

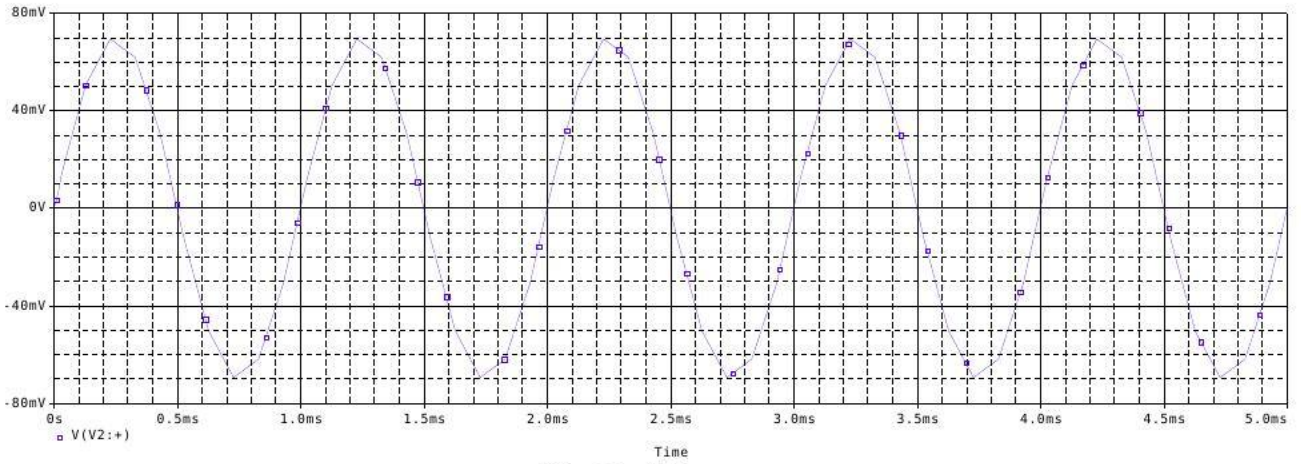
$$I_D = (V_{CC} - V_D) / R_D = (15 - 4.763) / 1k = 10.2mA$$

şeklinde bulunur.

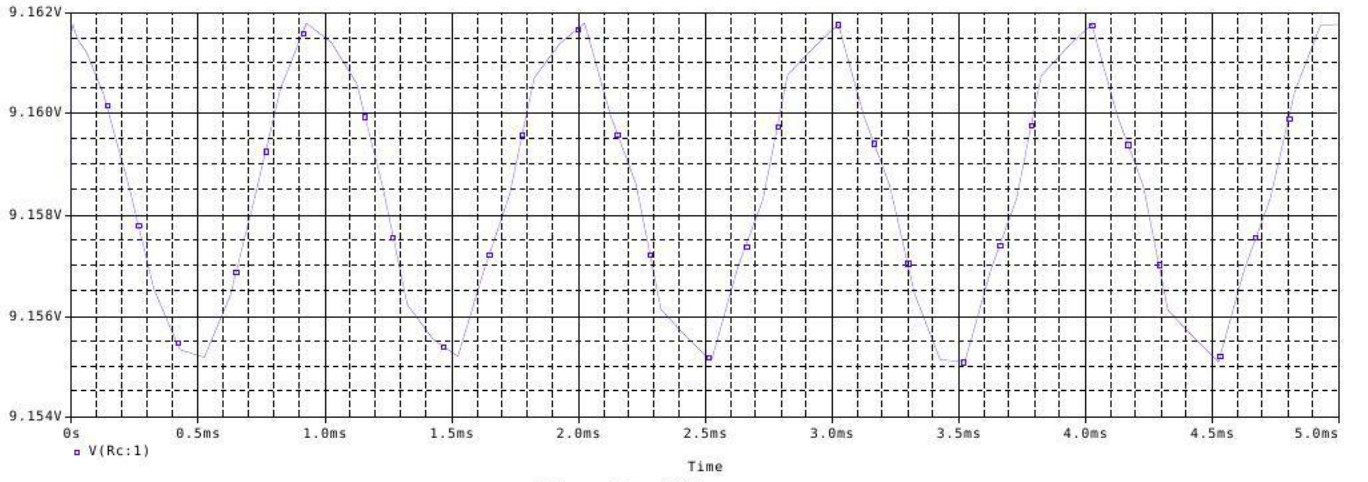
2)



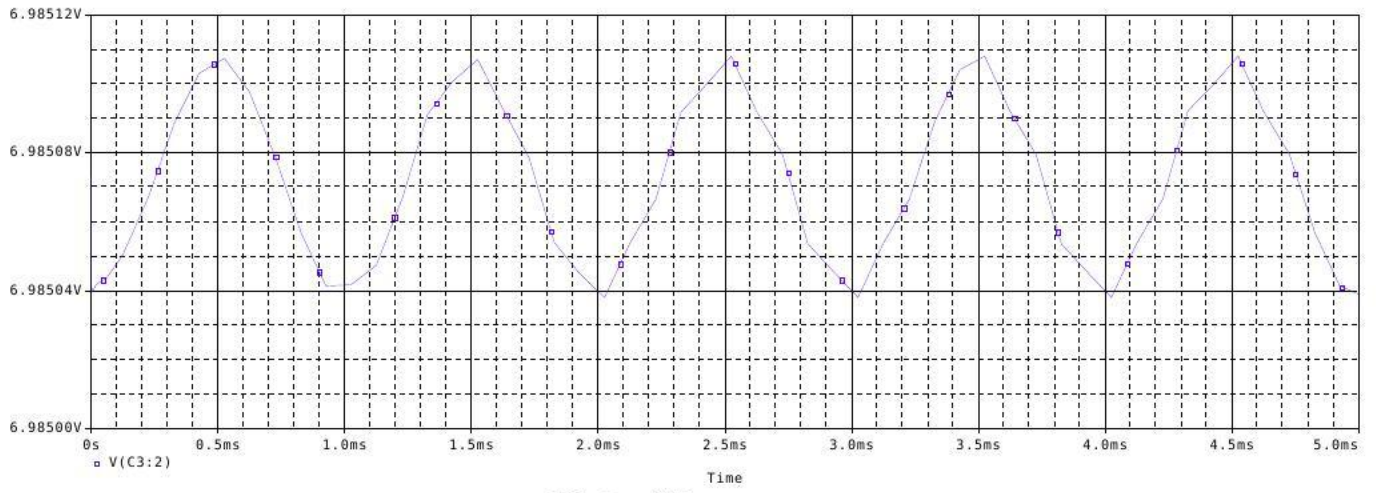
Bu soruda $V_{in} = 70mV$ ve frekans 1kHz olarak ayarlanmıştır. Buna göre ;



Vin Grafiği



V_{out} Grafiđı



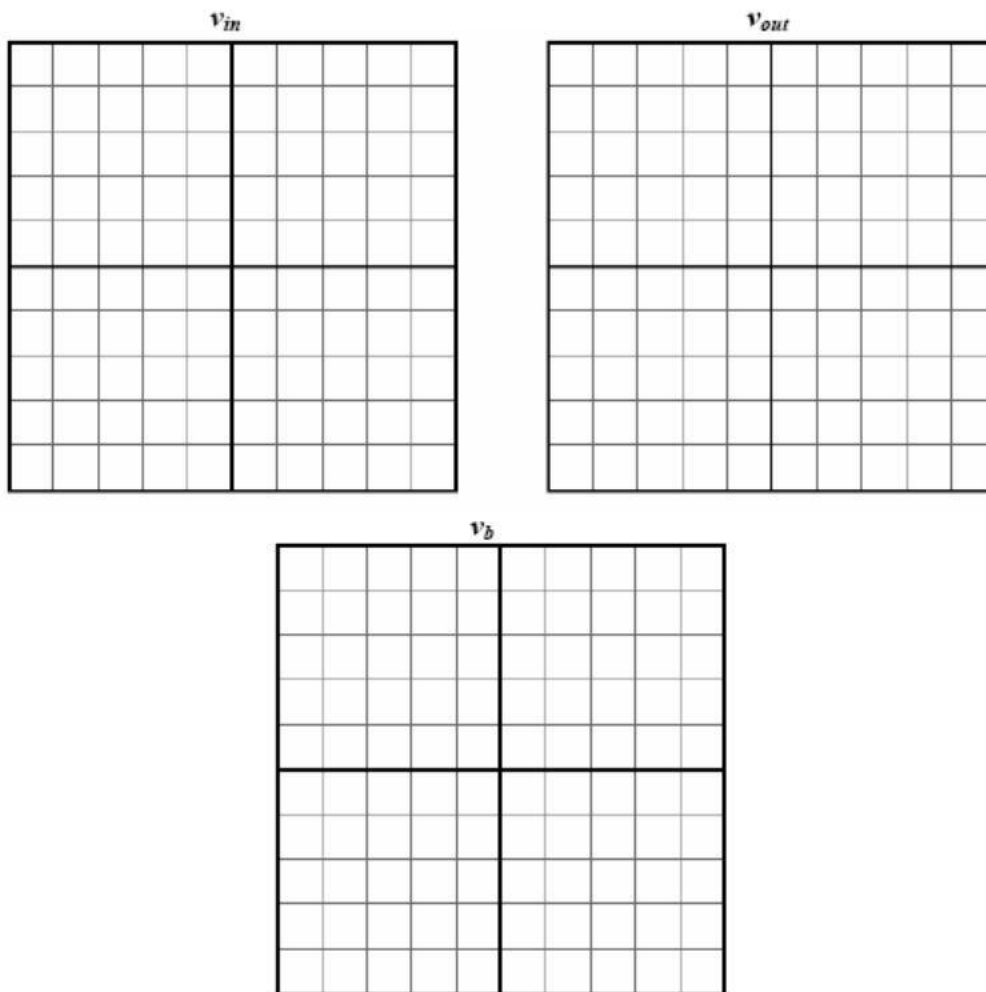
V_b Grafiđı

Bu deđerlere gore;

$$A_{v-firststage} = V_b / V_i =$$

$$A_{v-secondstage} = V_o / V_b =$$

$$A_{v-overall} = V_o / V_i =$$



3)

$V_{out,undistorted\ max} =$

$V_{out,undistorted(uncropped)\ max} =$

4)

$$R_x = 500 \text{ k} \rightarrow R_{in} = ?$$

5)

$$R_x = 1 \text{ k} \rightarrow R_{out} = ?$$