

Да се пресметне изходното напрежение на инвертиращ суматор, ако $R_F=250\text{K}$, $R_1=6\text{K}$, $R_2=8\text{K}$, $u_1=20\text{mV}$, $u_2=10\text{mV}$.

Решение:

$$i_1 = \frac{U_1}{R_1} = \frac{20 \times 10^{-3}}{6 \times 10^3} = 3,33 \times 10^{-6} = 3,33 \mu A$$

$$i_2 = \frac{U_2}{R_2} = \frac{10 \times 10^{-3}}{8 \times 10^3} = 1,25 \times 10^{-6} = 1,25 \mu A$$

$$\begin{aligned} -i_F &= i_1 + i_2 = 3,33 + 1,25 = 4,58 \mu A \\ i_F &= -4,58 \mu A \end{aligned}$$

$$U_0 = -i_F \times R_F = (4,58 \times 10^{-6}) \times (250 \times 10^3) = 1145 \times 10^{-3} = 1145 \text{mV}$$