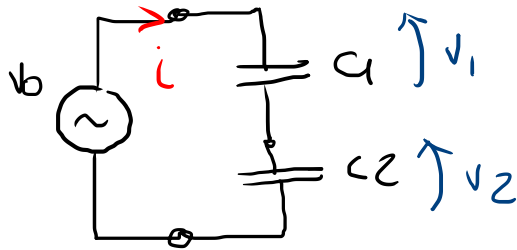


$$X_C = \frac{1}{\omega C} = \frac{1}{2\pi f \cdot C}$$



$$Z = \underbrace{R} + j \underbrace{X}$$

$$V = I \cdot Z = a + jb$$

$$V_0 = i \cdot Z_1 + i \cdot Z_2 \rightarrow i = \frac{V_0}{Z_1 + Z_2}$$

$$V_2 = i \cdot Z_2 = \frac{V_0}{Z_1 + Z_2} \cdot Z_2$$

$$Z_1 = \frac{1}{\omega C_1}$$

$$Z_2 = \frac{1}{\omega C_2}$$

$$V_2 = \frac{V_0}{\frac{1}{\omega C_1} + \frac{1}{\omega C_2}} \cdot \frac{1}{\omega C_2} = \frac{V_0}{\frac{C_2 + C_1}{\omega C_1 C_2}} \cdot \frac{1}{\omega C_2} = V_0 \cdot \frac{\cancel{\omega C_1} \cancel{C_2}}{C_2 + C_1} \cdot \frac{1}{\cancel{\omega} \cancel{C_2}} =$$

$$= V_0 \frac{C_1}{C_2 + C_1}$$

$$V_1 = V_0 \frac{C_2}{C_1 + C_2}$$

12V

$$C_1 = 100 \mu\text{F}$$

$$C_2 = 10 \mu\text{F}$$

m 10^{-3}

μ 10^{-6}

n 10^{-9}

$$V_1 = 12 \cdot \frac{10 \cdot \cancel{10^{-9}}}{10 \cdot \cancel{10^{-9}} + 100 \cdot 10^{-9}} = 12 \cdot \frac{10}{110} = 1,09 \text{ V}$$

$$V_2 = \sim = 12 \cdot \frac{100}{110} = 10,91 \text{ V}$$