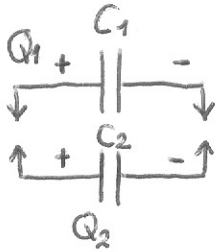


7.) $U_1 = 80V$ $U_2 = 16V$ $C_2 = 60\mu F$ $U_k = 20V$ $C_1 = ?$ a.) egyenmü b.) ellentétes

$$Q = CU$$

parh. $C_e = C_1 + C_2$
 $Q = Q_1 + Q_2$

a.)



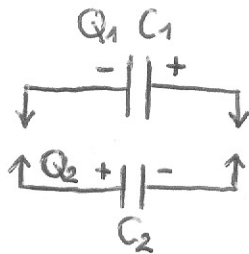
$$\left. \begin{aligned} Q_k &= Q_1 + Q_2 = C_1 U_1 + C_2 U_2 \\ C_e &= C_1 + C_2 \\ Q_k &= C_e U_k = (C_1 + C_2) U_k \end{aligned} \right\} =$$

$$C_1 U_1 + C_2 U_2 = (C_1 + C_2) U_k$$

$$\downarrow$$

$$\underline{\underline{C_1}}$$

b.)



$$\left. \begin{aligned} Q_k &= |Q_2 - Q_1| = |C_2 U_2 - C_1 U_1| \\ Q_k &= C_e U_k = (C_1 + C_2) U_k \end{aligned} \right\} =$$

$$C_2 U_2 > C_1 U_1$$

$$C_2 U_2 - C_1 U_1 = (C_1 + C_2) U_k$$

$$C_2 (U_2 - U_k) = C_1 (U_k + U_1)$$



$$C_2 U_2 < C_1 U_1$$

$$C_1 U_1 - C_2 U_2 = (C_1 + C_2) U_k$$

$$C_1 (U_1 - U_k) = C_2 (U_k + U_2)$$



$$\underline{\underline{C_1}}$$