62. We cannot expect simple energy conservation to hold since energy is presumably dissipated either as heat in the hookup wires or as radio waves while the charge oscillates in the course of the system "settling down" to its final state (of having 40 V across the parallel pair of capacitors C and 60 μF). We do expect charge to be conserved. Thus, if Q is the charge originally stored on C and q_1, q_2 are the charges on the parallel pair after "setting down," then

$$\begin{aligned} Q &= q_1 + q_2 \\ C(100\text{ V}) &= C(40\text{ V}) + (60\,\mu\text{F})\,(40\text{ V}) \end{aligned}$$

which leads to the solution $C = 40\,\mu$F.