28. (a) The potential difference across C_1 (the same as across C_2) is given by

$$V_1 = V_2 = \frac{C_3 V}{C_1 + C_2 + C_3} = \frac{(4.00\,\mu\mathrm{F})(100\,\mathrm{V})}{10.0\,\mu\mathrm{F} + 5.00\,\mu\mathrm{F} + 4.00\,\mu\mathrm{F}} = 21.1\ \mathrm{V}\ .$$

Also, $V_3 = V - V_1 = V - V_2 = 100\,\mathrm{V} - 21.1\,\mathrm{V} = 78.9\,\mathrm{V}$. Thus,

$$\begin{aligned} q_1 &= C_1 V_1 = (10.0\,\mu\mathrm{F})(21.1\,\mathrm{V}) = 2.11 \times 10^{-4}\ \mathrm{C} \\ q_2 &= C_2 V_2 = (5.00\,\mu\mathrm{F})(21.1\,\mathrm{V}) \ = 1.05 \times 10^{-4}\ \mathrm{C} \\ q_3 &= q_1 + q_2 = 2.11 \times 10^{-4}\,\mathrm{C} + 1.05 \times 10^{-4}\,\mathrm{C} = 3.16 \times 10^{-4}\ \mathrm{C}\ . \end{aligned}$$

(b) The potential differences were found in the course of solving for the charges in part (a).

(c) The stored energies are as follows:

$$\begin{aligned} U_1 &= \frac{1}{2} C_1 V_1^2 = \frac{1}{2}(10.0\,\mu\mathrm{F})(21.1\,\mathrm{V})^2 = 2.22 \times 10^{-3}\ \mathrm{J}\ , \\ U_2 &= \frac{1}{2} C_2 V_2^2 = \frac{1}{2}(5.00\,\mu\mathrm{F})(21.1\,\mathrm{V})^2 = 1.11 \times 10^{-3}\ \mathrm{J}\ , \\ U_3 &= \frac{1}{2} C_3 V_3^2 = \frac{1}{2}(4.00\,\mu\mathrm{F})(78.9\,\mathrm{V})^2 = 1.25 \times 10^{-2}\ \mathrm{J}\ . \end{aligned}$$