69. (a) The voltage across C_1 is 12 V, so the charge is

$$q_1 = C_1 V_1 = 24\,\mu\text{C} \quad .$$

(b) We reduce the circuit, starting with C_4 and C_3 (in parallel) which are equivalent to $4\,\mu$F. This is then in series with C_2, resulting in an equivalence equal to $\frac{4}{3}\,\mu$F which would have 12 V across it. The charge on this $\frac{4}{3}\,\mu$F capacitor (and therefore on C_2) is $(\frac{4}{3}\,\mu\text{F})(12\,\text{V}) = 16\,\mu$C. Consequently, the voltage across C_2 is

$$V_2 = \frac{q_2}{C_2} = \frac{16\,\mu\text{C}}{2\,\mu\text{F}} = 8\ \text{V} \ .$$

This leaves $12 - 8 = 4$ V across C_4 (similarly for C_3).