52. The time it takes for the voltage difference across the capacitor to reach V_L is given by $V_L = \mathcal{E}(1-e^{-t/RC})$. We solve for R:

$$R = \frac{t}{C\ln[\mathcal{E}/(\mathcal{E}-V_L)]} = \frac{0.500\,\text{s}}{(0.150\times10^{-6}\,\text{F})\ln[95.0\,\text{V}/(95.0\,\text{V}-72.0\,\text{V})]} = 2.35\times10^{6}\,\Omega$$

where we used $t = 0.500\,\text{s}$ given (implicitly) in the problem.