31.38. **Model:** Assume ideal wires as the capacitors discharge through the two 1 kΩ resistors.
Visualize: The circuit in Figure Ex37.38 has an equivalent circuit with resistance R_{eq} and capacitance C_{eq}.
Solve: The equivalent capacitance is $C_{eq} = 2\ \mu\text{F} + 2\ \mu\text{F} = 4\ \mu\text{F}$, and the equivalent resistance is

$$\frac{1}{R_{eq}} = \frac{1}{1\ \text{k}\Omega} + \frac{1}{1\ \text{k}\Omega} \Rightarrow R_{eq} = 500\ \Omega$$

Thus, the time constant for the discharge of the capacitors is

$$\tau = R_{eq}C_{eq} = (500\ \Omega)(4\ \mu\text{F}) = 2 \times 10^{-3}\ \text{s} = 2\ \text{ms}$$