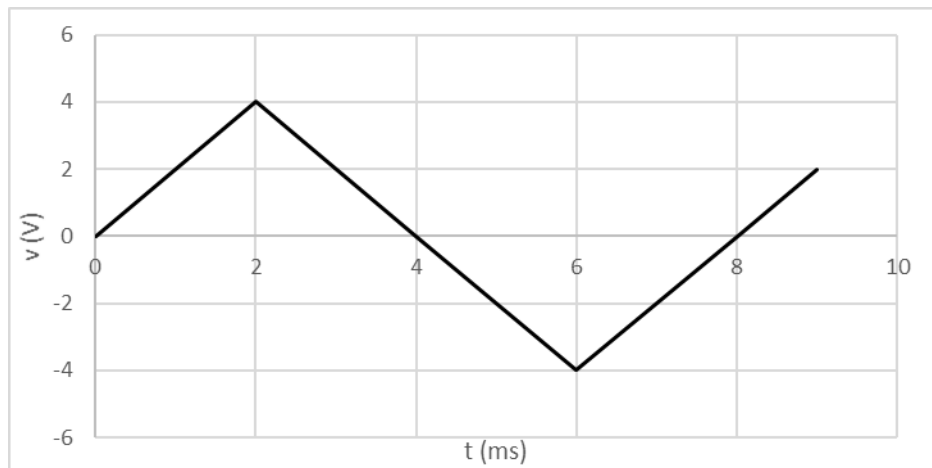
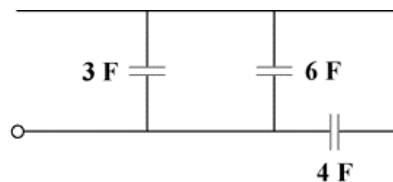


10.1 The voltage across a $15\text{-}\mu\text{F}$ capacitor as a function of time is shown below. Sketch the corresponding current waveform.

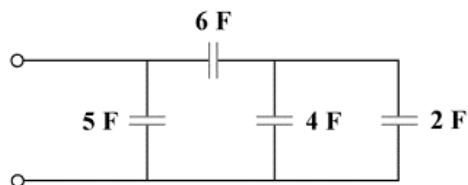


10.2 At $t=0$, the voltage across a $480\text{ }\mu\text{F}$ capacitor is 5 V , and a current of $30t\text{ }\mu\text{A}$ flows through it. Calculate the voltage across the capacitor when $t = 800\text{ ms}$.

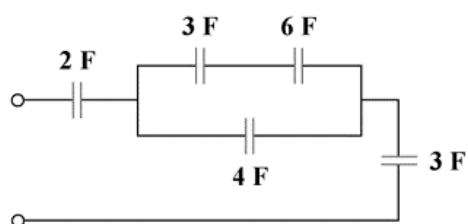
10.3 Determine the equivalent capacitance for each of the circuits



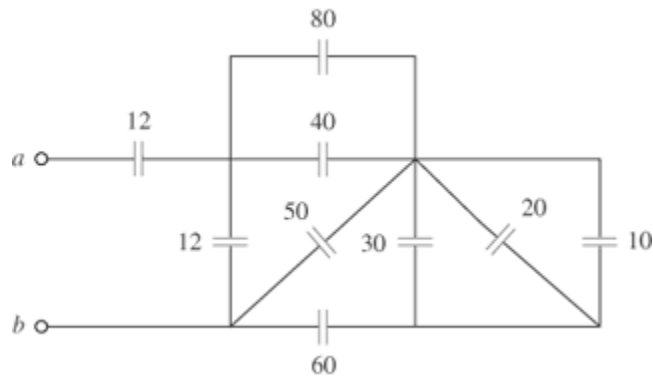
(a)



(b)

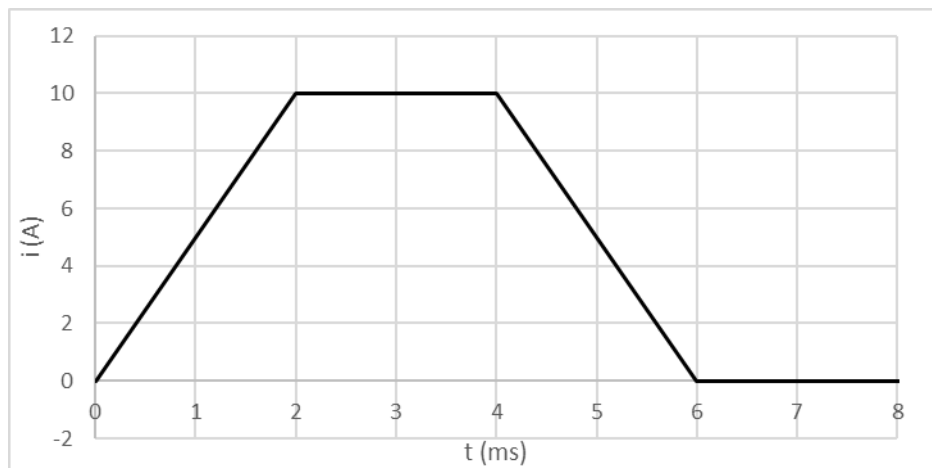


- 10.4 Find the equivalent capacitance between terminals a and b in the circuit. All capacitances are in μF .

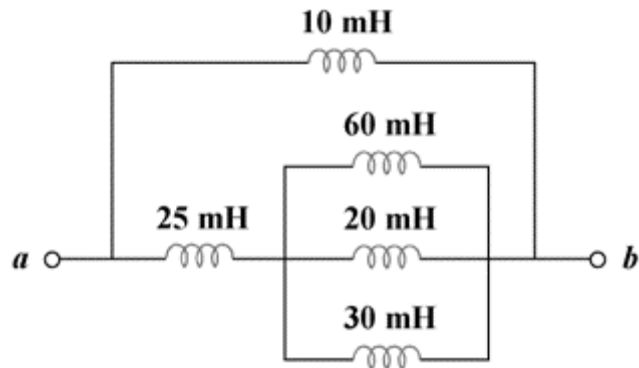


- 10.5 The current through a 40-mH inductor is 0 for $t < 0$ and te^{-2t} A for $t > 0$. Find the voltage $v(t)$.

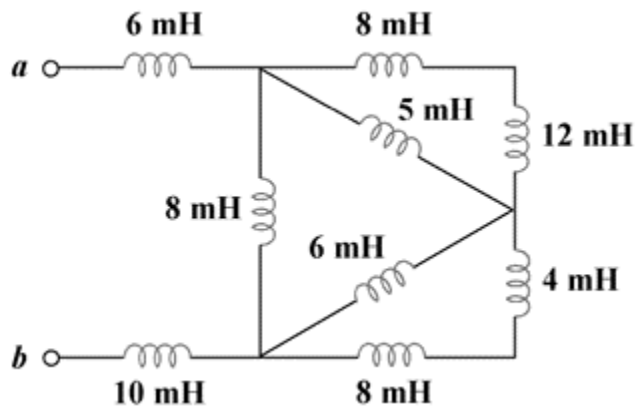
- 10.6 The current through a 2.0 mH inductor is shown. Determine the voltage across the inductor at $t=1, 3, 5$, and 7 ms.



10.7 Determine L_{eq} at terminals a - b of the circuit.



10.8 Find L_{eq} at the terminals of the circuit.



10.9 Find the voltage v_a in the circuit.

