

6.14. The voltage across a 6- $\mu\text{F}$  capacitor is given by the waveform in Fig. P6.14. Plot the waveform for the capacitor current.

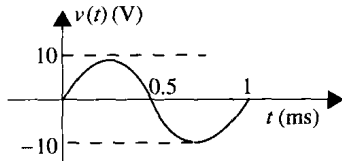


FIGURE P6.14

6.15. The waveform for the current in a 200- $\mu\text{F}$  capacitor is shown in Fig. P6.15. Determine the waveform for the capacitor voltage.

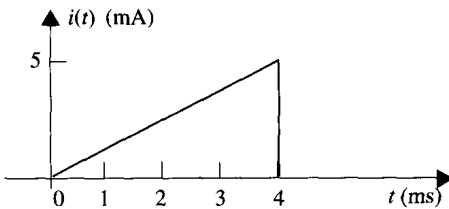


FIGURE P6.15

6.16. The current in an inductor changes from 0 to 200 mA in 4 ms and induces a voltage of 100 mV. What is the value of the inductor?

6.47. For the network in Fig. P6.47, choose  $C$  such that

$$v_o = -10 \int v_s dt$$

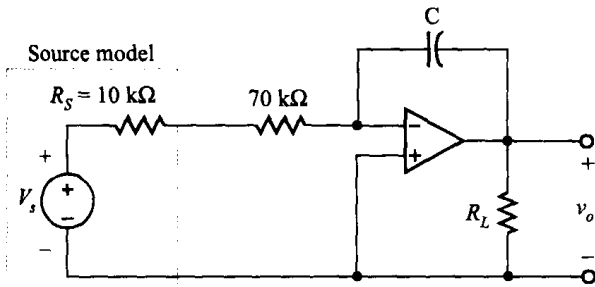


FIGURE P6.47

6.22. The current in a 10-mH inductor is shown in Fig. P6.22. Determine the waveform for the voltage across the inductor.

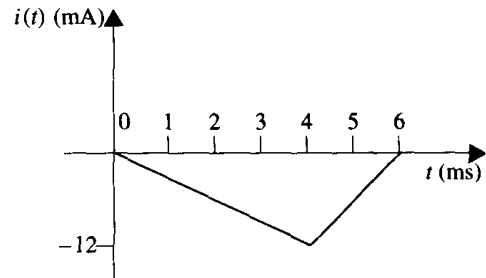


FIGURE P6.22

6.23. The current in a 50-mH inductor is given in Fig. P6.23. Sketch the inductor voltage.

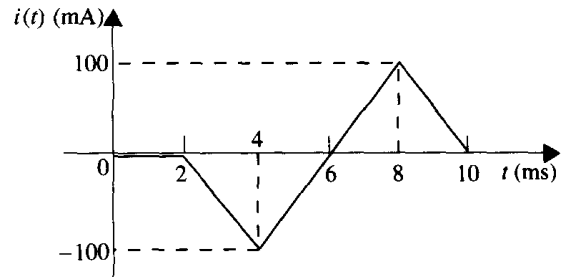


FIGURE P6.23

6.48. Design an op-amp circuit that will produce the output voltage

$$v_o = \int v_s dt - 10v_s$$