

**Chapter 7, Solution 33.**

The voltage across a 10-mH inductor is  $15\delta(t - 2)$  mV. Find the inductor current, assuming the inductor is initially uncharged.

**Solution**

$$i(t) = \frac{1}{L} \int_0^t v(t) dt + i(0)$$

$$i(t) = \frac{10^{-3}}{10 \times 10^{-3}} \int_0^t 15\delta(t - 2) dt + 0$$

$$i(t) = 1.5 u(t - 2) \text{ A}$$