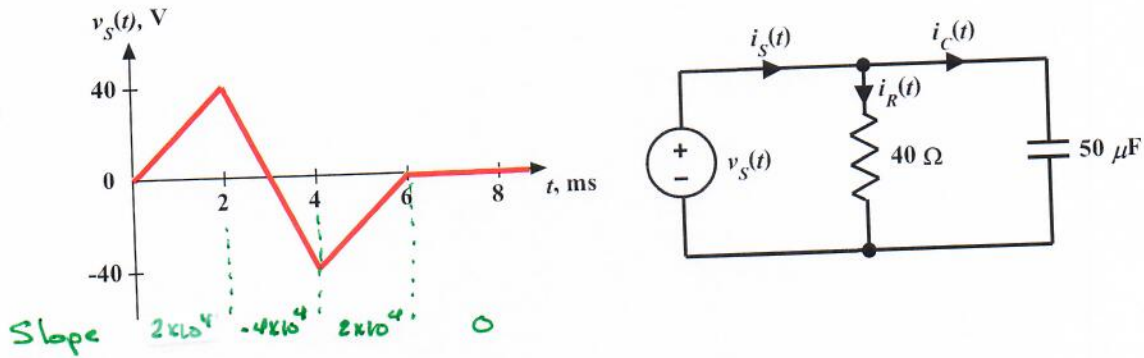


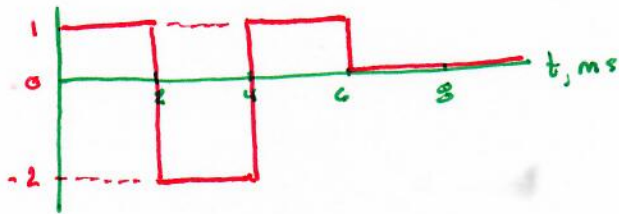
EE/EET 2240  
**Homework Problem #040**



The independent voltage source is described by the plot shown.

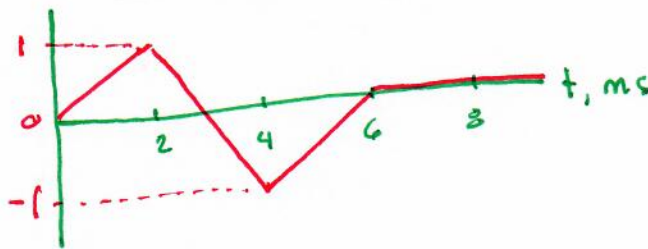
- a. Accurately sketch the waveform for the capacitor current,  $i_C(t)$ .

$$i_C(t) = 50 \times 10^{-6} \times \dot{v}_S(t), \text{ A}$$



- b. Accurately sketch the waveform for the resistor current,  $i_R(t)$ .

$$i_R(t) = \frac{v_S(t)}{40}, \text{ A}$$



- c. Accurately sketch the waveform for the source current,  $i_S(t)$ .

$$i_S(t) = i_C(t) + i_R(t), \text{ A}$$

