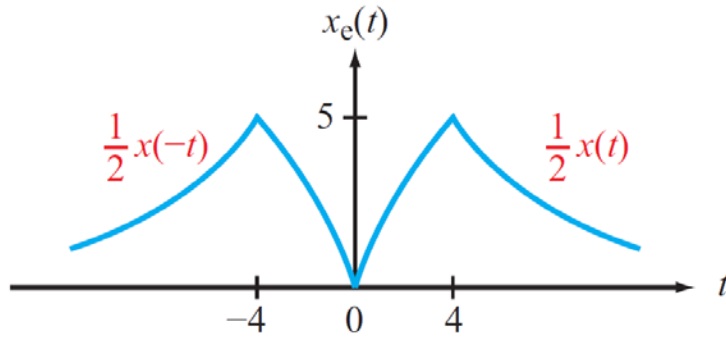


**Concept Question 1-4:** Define *even-symmetrical* and *odd-symmetrical* waveforms.

An even-symmetrical waveform has the property that it is invariant to flipping around the vertical axis. If  $x(t)$  is the waveform, then  $x(-t) = x(t)$ , as shown in Fig. 1-11(b).



An odd-symmetrical waveform has the property that flipping it around the vertical axis has the same effect as flipping it around the horizontal axis. If  $x(t)$  is the waveform, then  $x(-t) = -x(t)$ , as shown in Fig. 1-11(c).

