## Problem 3.26

 $\frac{\text{Match the waveform letter with the spectrum number}}{(a) \text{ matches to } (3)}$ 

The signal as sum of sinusoids is given as:

 $x(t) = 4\cos(4\pi t + \pi) + 4\cos(6\pi t + \frac{\pi}{2})$ 

(b) matches to (1)

The signal as sum of sinusoids is given as:

$$x(t) = 2\cos(4\pi t + \frac{\pi}{4}) + 4\cos(6\pi t - \frac{\pi}{3})$$

(c) matches to 
$$(2)$$

The signal as sum of sinusoids is given as:

$$x(t) = 2\cos(4\pi t + \frac{\pi}{4}) - 3$$

(d) matches to (5)

The signal as sum of sinusoids is given as:

$$x(t) = 4\cos(4\pi t + \pi) - 2$$

(e) matches to (4)

The signal as sum of sinusoids is given as:

$$x(t) = 4\cos(2\pi t + \pi) + 4\cos(4\pi t + \pi)$$