Sheet # 2

1. The signals in Figure 1 are zero except as shown.

   i. For the signal x(t) of Figure 1, plot;
      a) x (- t/3)
      b) x (3t - 6)
      c) x (3 + t)
      d) x (2 - t)

   ii. For the signal x(t) of Figure 1, plot;
      a) 4x (t) - 2
      b) 2x (t) + 2
      c) 2x (2t) + 2
      d) -4x (t) + 2

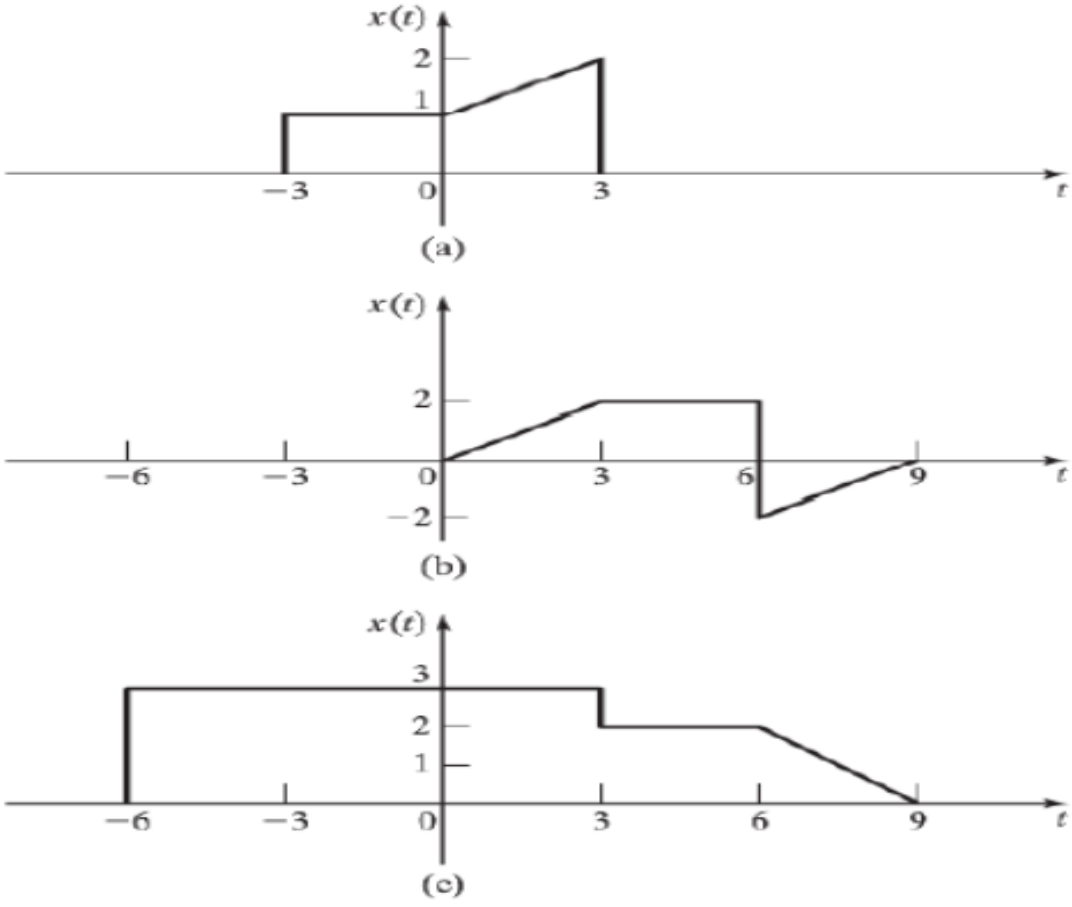

Figure 1

2. Given the two signals in figure 2
    a) Express $x_2(t)$ as a function of $x_1(t)$
    b) Verify your results by checking at least three points in time

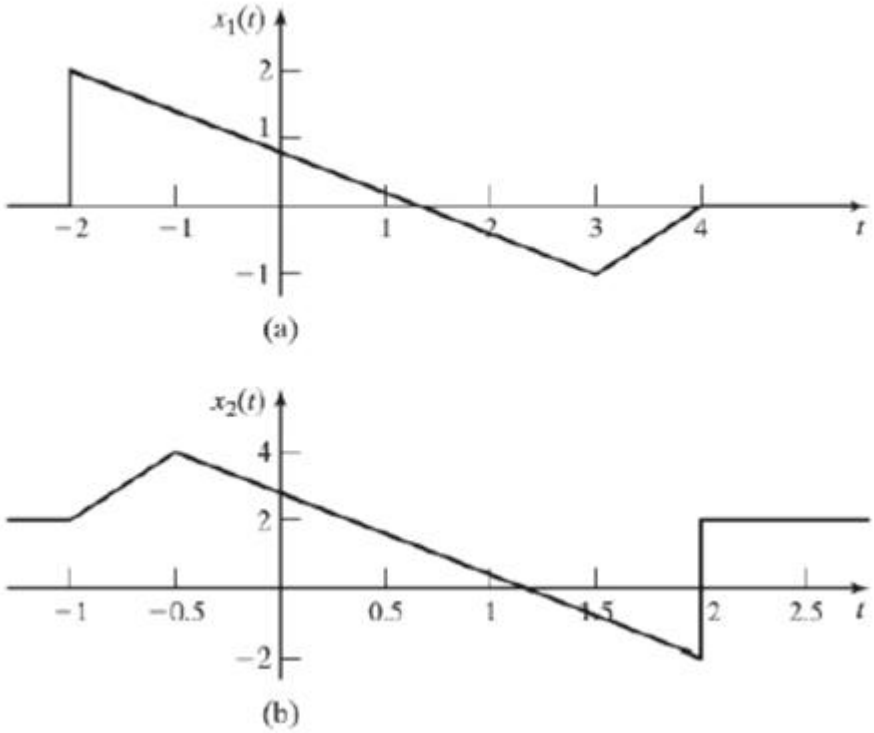

Figure 2

3. For each of the signals given, determine mathematically if the signal is even, odd, or neither?

    a) $x(t) = -4t$
    b) $x(t) = e^{-|t|}$
    c) $x(t) = 5\cos(3t)$
    d) $x(t) = \sin\left(3t + \frac{3\pi}{2}\right)$
    e) $x(t) = u(t) - u(-t)$
    f) $x(t) = -u(t-1) + u(-t-1)$