Sheet (1)

Signals & Linear Systems

1. **Sketch each of the following continuous-time signals.**

   (i) $x(t) = 2\sin(2\pi t)$

   (ii) $x(t) = \begin{cases} 3e^{-2t}, & t \geq 0 \\ 0, & t < 0 \end{cases}$

   (iii) $x(t) = 1/|t|$

2. **Sketch the signal:**

   $$x(t) = \begin{cases} 1-t, & 0 \leq t \leq 1 \\ 0, & \text{otherwise} \end{cases}$$

   Now sketch each of the following and describe briefly in words how each of the signals can be derived from the original signal

   (i) $x(t+3)$

   (ii) $x(t/3)$

   (iii) $x(t/3+1)$

   (iv) $x(-t+2)$

   (v) $x(-2t+1)$

Dr. Michael Nasief
Eng. Mohamed Elsayed