

Signals and Systems (CT 203)

Tutorial Sheet-03

DA-IICT, Gandhinagar.

1. Determine and sketch the even and odd parts of the signals shown below in Fig.1 and 2.

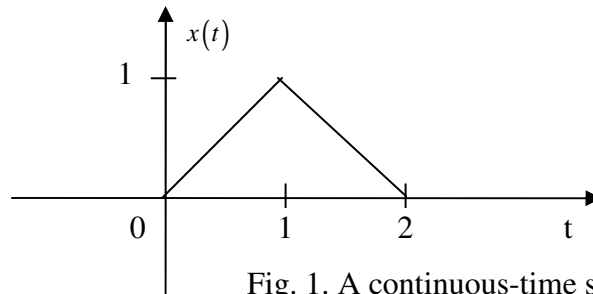


Fig. 1. A continuous-time signal

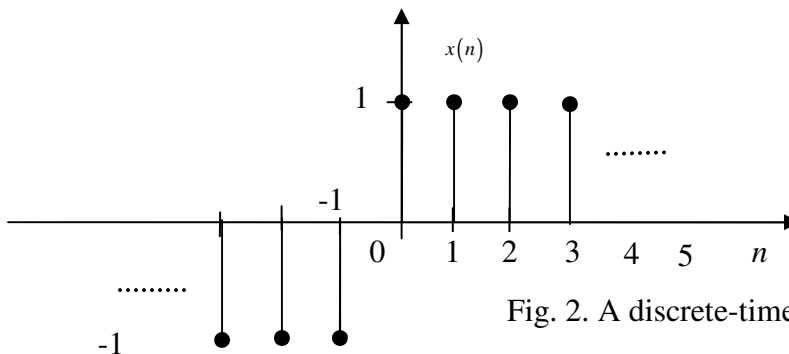


Fig. 2. A discrete-time signal

2. Determine the fundamental period of the discrete-time signal given by
$$x(n) = e^{j(2\pi/3)n} + e^{j(3\pi/4)n}$$
3. Develop mathematical model for series RC circuit
4. Develop mathematical model for automobile systems
5. Develop mathematical model for series RLC circuit as approximation to a physical system
6. Develop mathematical model for mass-spring and damper system.
7. Develop mathematical model for system as electric motor with load