

ECE 311 - Homework #30

Properties of Fourier Transforms

Use properties of Fourier Transforms to determine the Fourier Transform for the following signals:

1) $x(t) = x(t + 2\pi)$

$$x(t) = \begin{cases} t(\pi - t) & 0 < t < \pi \\ 0 & \textit{otherwise} \end{cases}$$

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

$$x(t) = \begin{cases} 1 & 0 < t < 1 \\ 0 & \textit{otherwise} \end{cases}$$

3) $x(t) = x(t + \pi)$

$$x(t) = \begin{cases} t & 0 < t < 1 \\ 0 & \textit{otherwise} \end{cases}$$