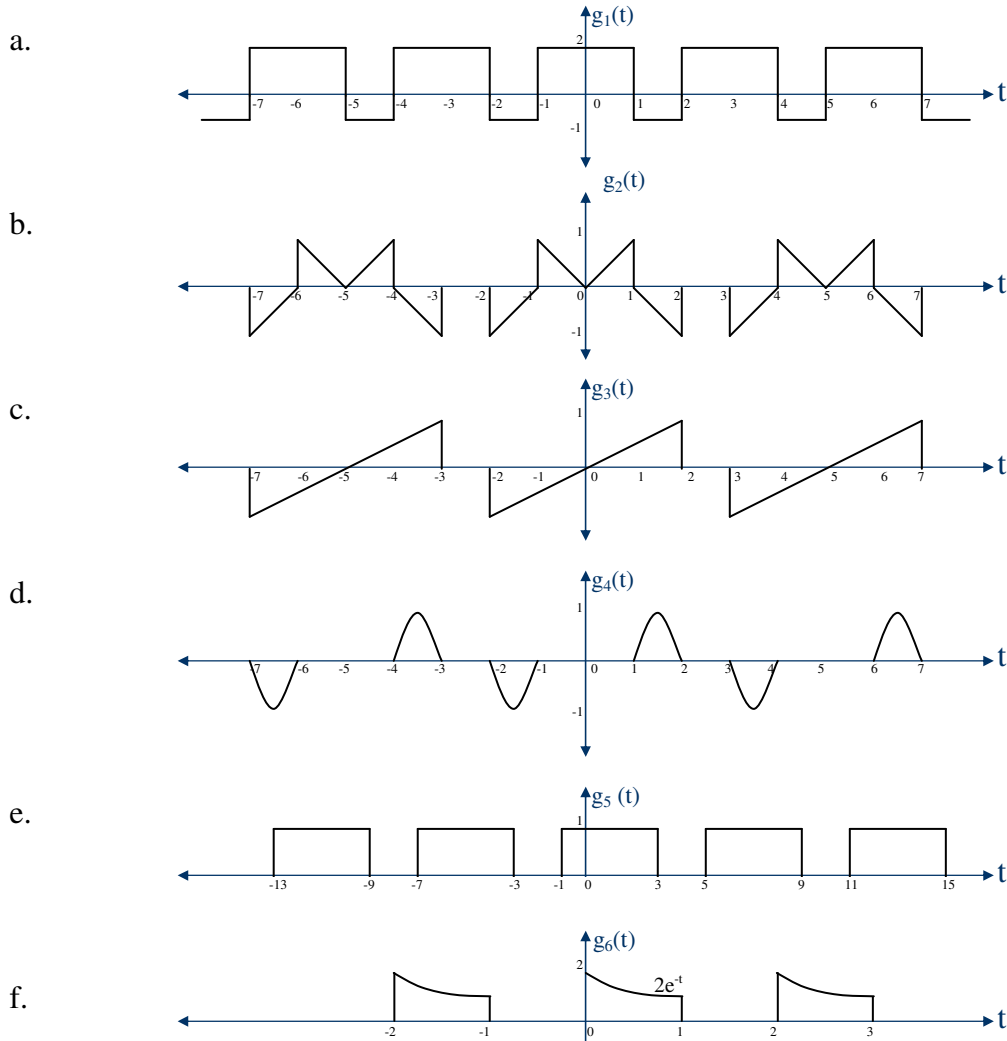




COLLEGE OF ENGINEERING & TECHNOLOGY

Department : Electronics & Communications Engineering
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Course : Spectral Analysis
Course Code : EC321

Sheet 1



g.
$$g_7(t) = \cos\left(\frac{\pi}{4}t + \frac{\pi}{3}\right) + \sin\left(\frac{\pi}{4}t + \frac{\pi}{3}\right)$$

h.
$$g_8(t) = 0.5 \cos(2\pi 100t) \cdot \cos(2\pi 200t) - 0.5 \sin(2\pi 100t) \cdot \sin(2\pi 200t) \\ + 0.25 \sin(2\pi 100t) \cdot \cos(2\pi 200t) + 0.25 \cos(2\pi 100t) \cdot \sin(2\pi 200t)$$

1. Find the Fourier series expansion for the above signals with real coefficients.
2. Find the Fourier series expansion for the above signals with complex coefficients.