



Model 6

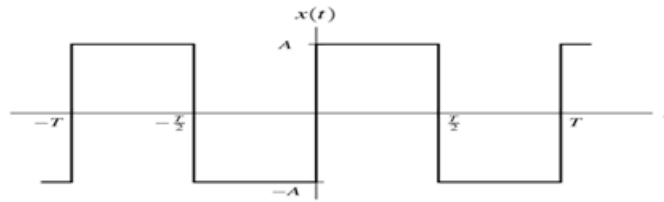
Answer the following four questions:

Question 1

Find $y[n] = x[n] * h[n]$ of $x[n] = \{4, 1, 2, 5\}$, and $h[n] = \{1, 2, -1\}$ using the matrix method.

Question 2

Find the Fourier series representation of the periodic square wave $x(t)$ shown in the following figure:



Question 3

Find the Laplace transform of $e^{j\omega t} = \cos\omega t + j\sin\omega t$.

Question 4

Find the Z-transform of $x(k) = u[n]$.

Best Wishes