ASSIGNMENT NO. 02:

**A logo of a university of engineering and technology

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**Spring 2024**

**Signal & System**

Submitted by: **NAVEED AHMAD**

Registration No.: **22PWCSE2165**

Class Section: **B**

“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

Student Signature: A blue line drawing on a white background

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Submitted to:

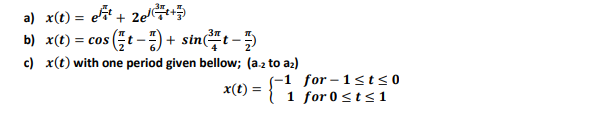
**Dr. Nasir Ahmad**

24/05/2024.

Department of Computer Systems Engineering

University of Engineering and Technology, Peshawar

**Question 1**. *Find the Fourier series representation for the following signals and sketch their spectrums.*

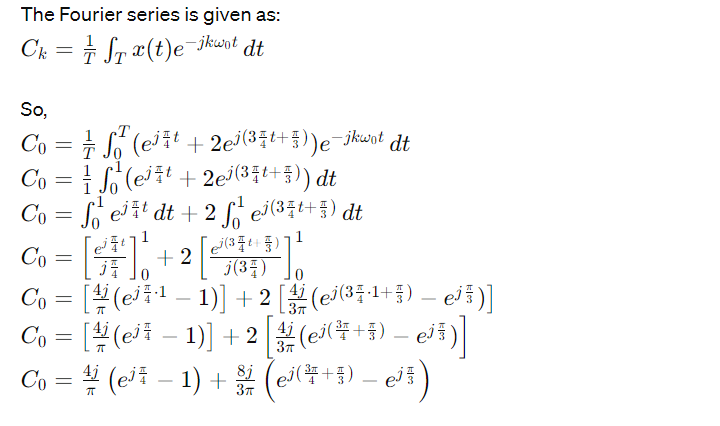


**Part(a):**

Solution:

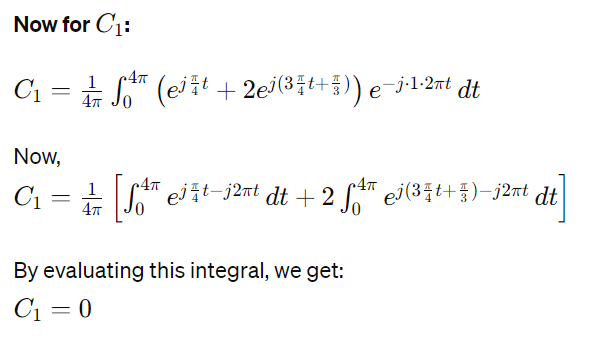
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Description automatically generated



A math problem with numbers

Description automatically generated



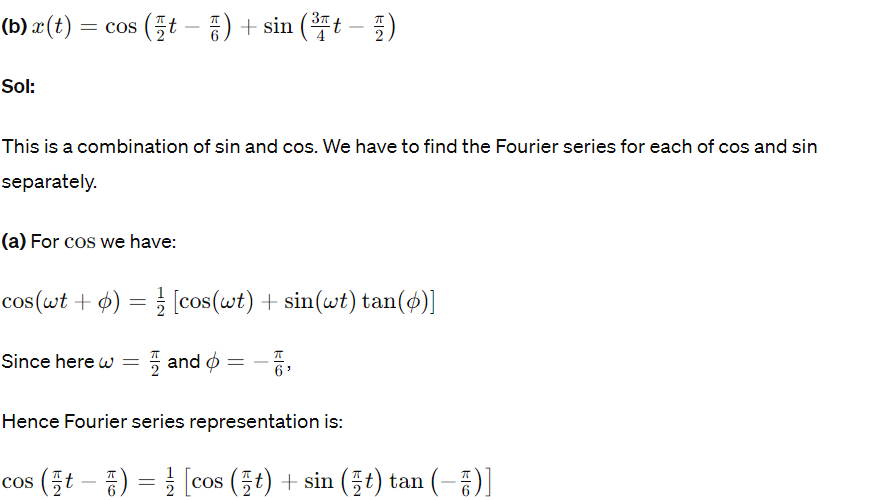
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**Part(b):**



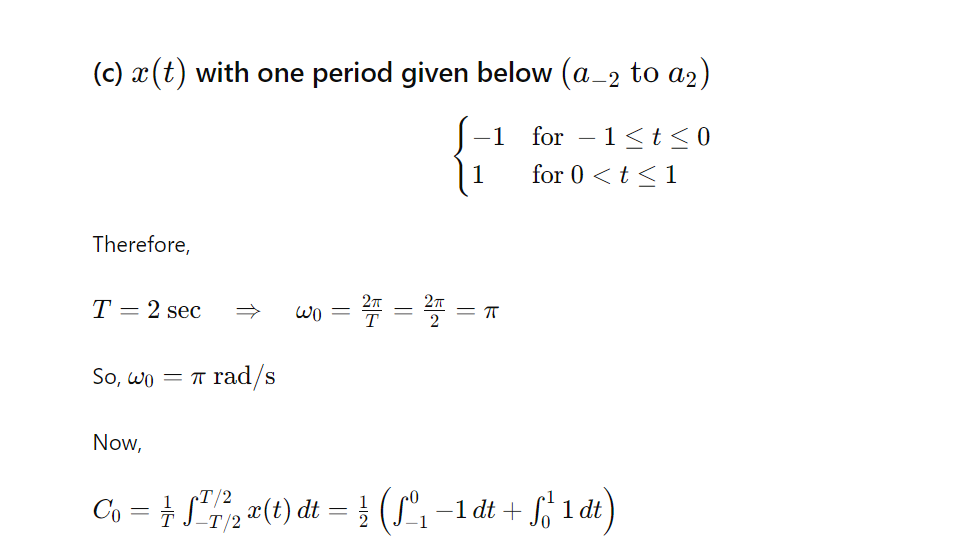
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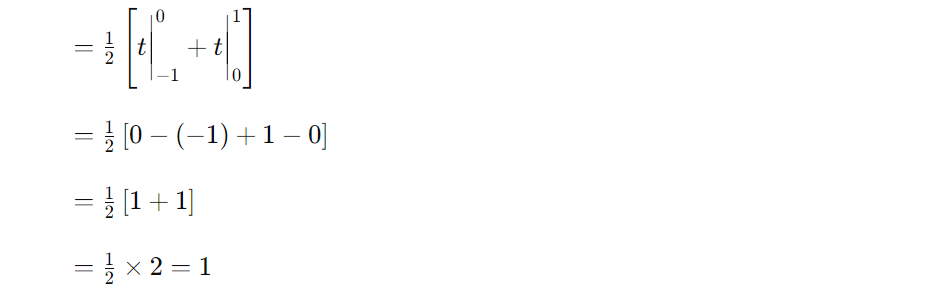
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**Part(c):**



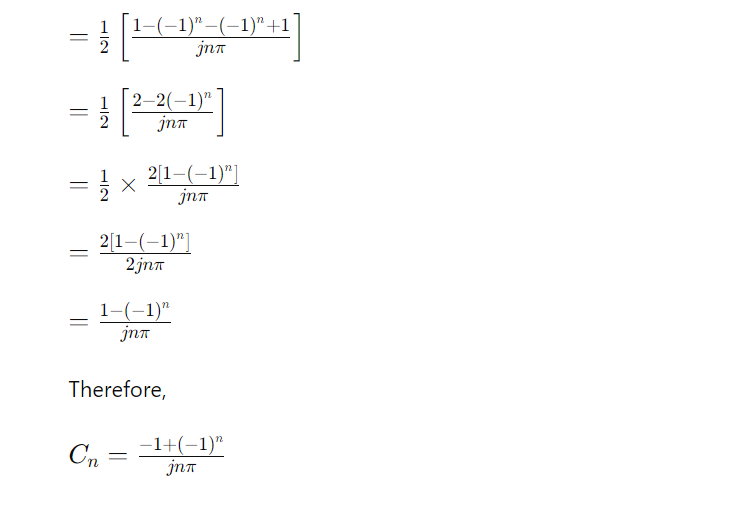


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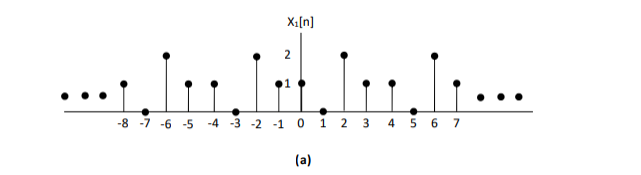
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A math equations on a white background

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**Question 2. Find the Fourier series representation for the signals given in the following figure and sketch their spectrums. For continuous-time signals find the frequency components from a-3 to a3**

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**Part(a):**

**Solution:**

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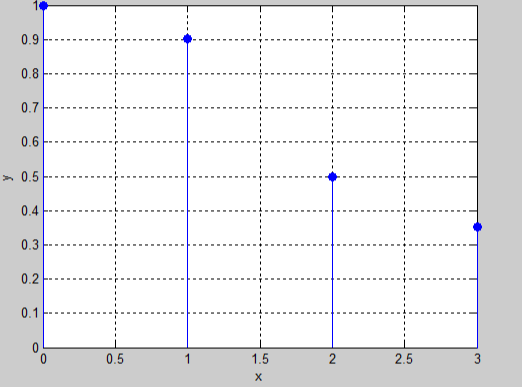
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A math equations and numbers

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**Spectrum:**

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**Part(b):**

**A graph of numbers and lines

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A math equations and formulas

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A math equations and formulas

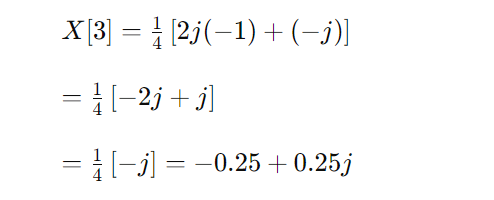
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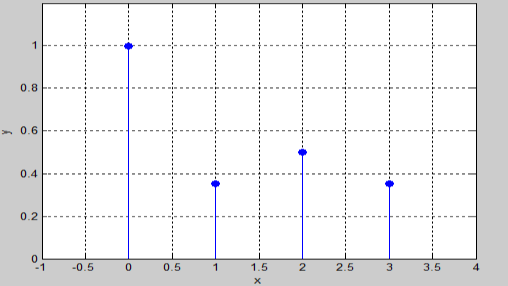
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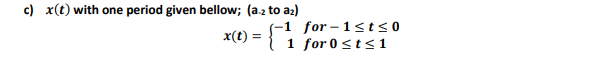
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**Magnitude spectrum:**

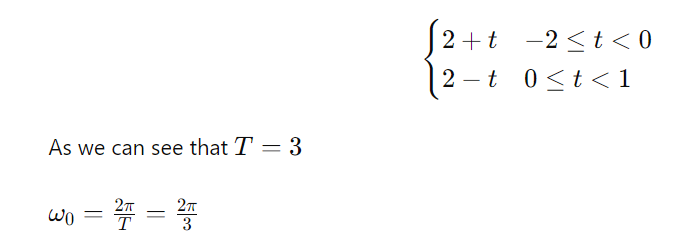
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**Part(c):**



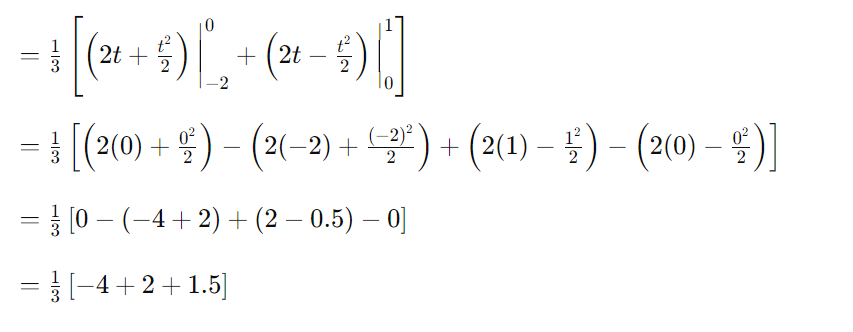
**A graph of a line

Description automatically generated**

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**A math equations on a white background

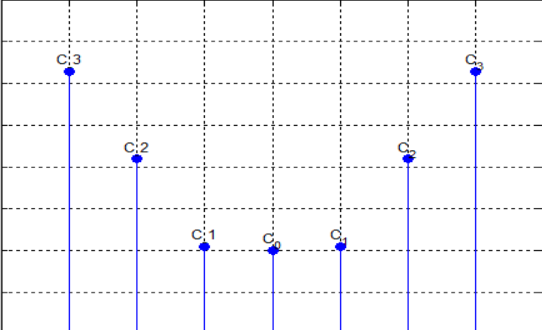
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**Spectrum:**

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**Question No. 03:**

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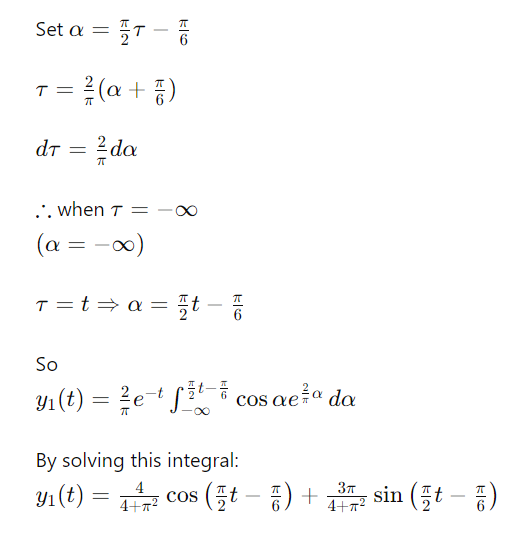
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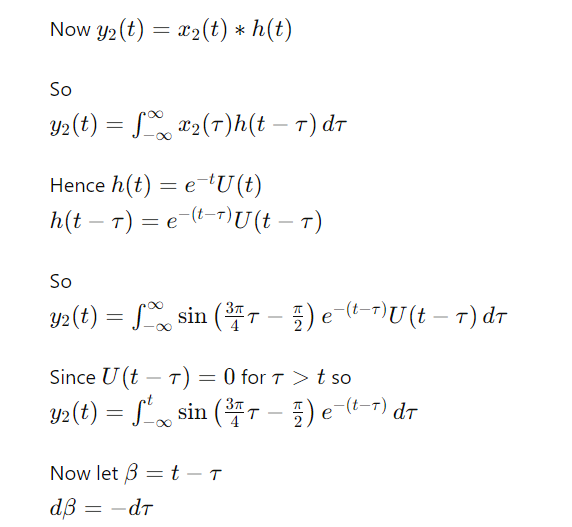
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**THE END.**