

Probleme parțial

curs.upb.ro/2021/mod/quiz/attempt.php?attempt=181481&cmid=118311

Aplicații Gmail Outlook YouTube Maps Netflix ETTI TelAcad Materiale Meditații...

Lista de lectură

UPB-Elearning

English (en)

Nicoleta Monica GĂUJĂNEANU

04-ELECTRONICA-L-A2-S1-SSI-D

Participants

Badges

Competencies

Grades

General

4 October - 10 October

11 October - 17 October

18 October - 24 October

25 October - 31 October

1 November - 7 November

04-ELECTRONICA-L-A2-S1: Semnale și sisteme (Seria D - 2021)

Dashboard / My courses / 04-ELECTRONICA-L-A2-S1-SSI-D / 6 December - 12 December / Probleme parțial

Question 1

Not yet answered

Marked out of 1.00

Flag question

Să se calculeze Transformata Fourier pentru următorul semnal analogic neperiodic

$$x(t) = \begin{cases} t^2 - 2 \cdot t + 1, & t \in [0, 2] \\ 2, & t \in (2, 4] \\ 0, & t \in \mathbb{R} - [0, 4] \end{cases}$$

Answer:

Finish attempt ...

Time left 0:00:38

Quiz navigation

1

Finish attempt ...

Teorie parțial

Jump to...

Incarcare rezolvare probleme parțial

ENG ROS

5:59 PM

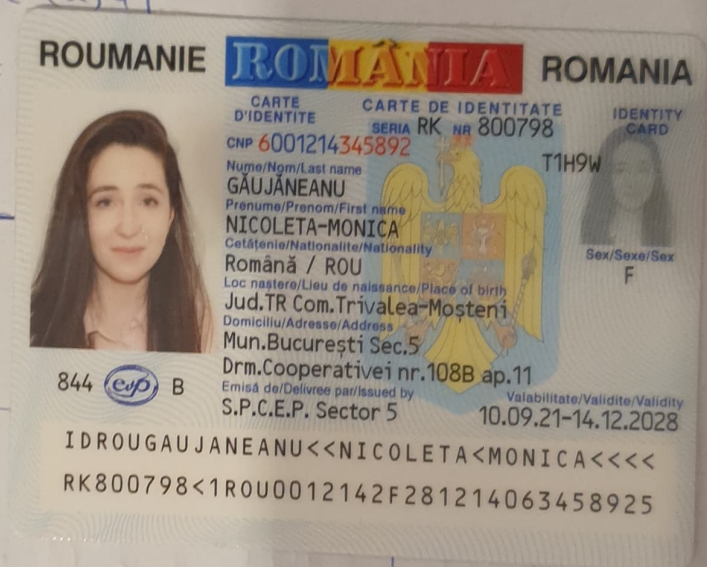
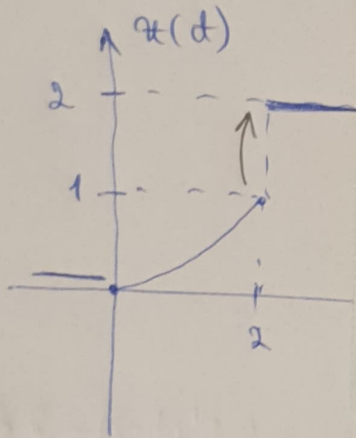
12/7/2021

Găujăneanu Nicoleta Monica, 424 D

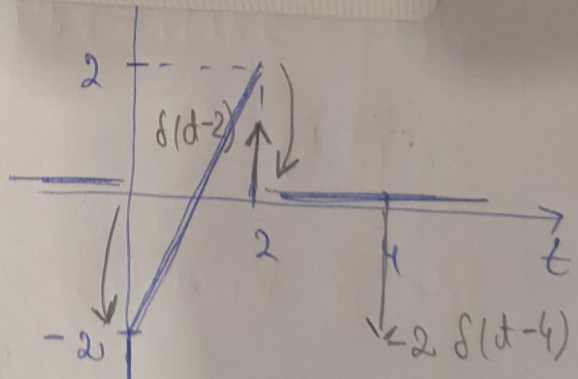
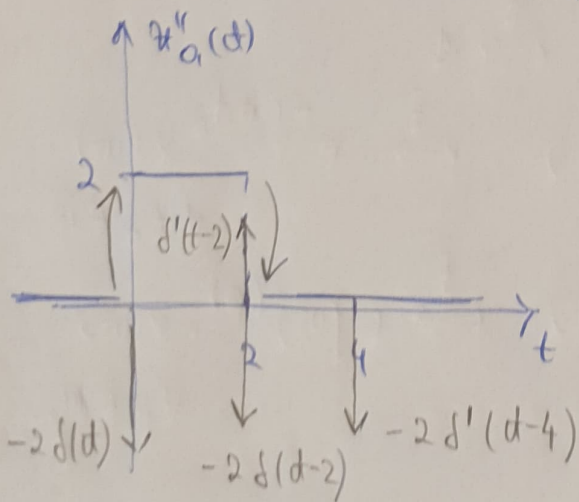
Partiul SS

Calc. Transform. Fourier pentru:

$$x(t) = \begin{cases} t^2 - 2t + 1, & t \in [0, 2] \\ 2, & t \in (2, 4] \\ 0, & t \in \mathbb{R} \setminus [0, 4] \end{cases}$$



$$x'_a(t) = \begin{cases} 2t - 2, & t \in [0, 2] \\ 0, & t \in \mathbb{R} \setminus [0, 2] \end{cases}$$



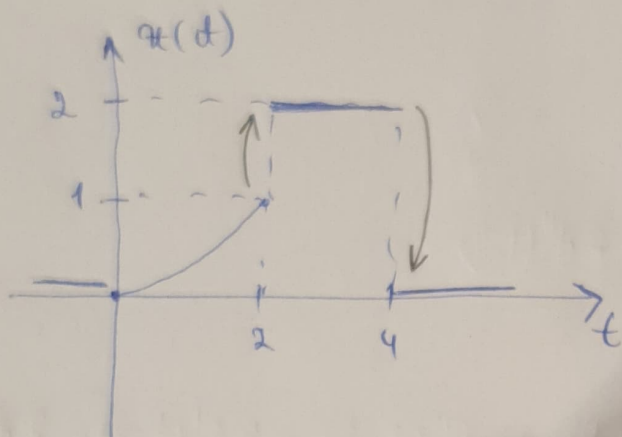
$$x''_a(t) = \begin{cases} 2, & t \in (0, 2) \\ 0, & t \in \mathbb{R} \setminus (0, 2) \end{cases}$$

Găyŕmeanu Nicoleta Monica, 424 D

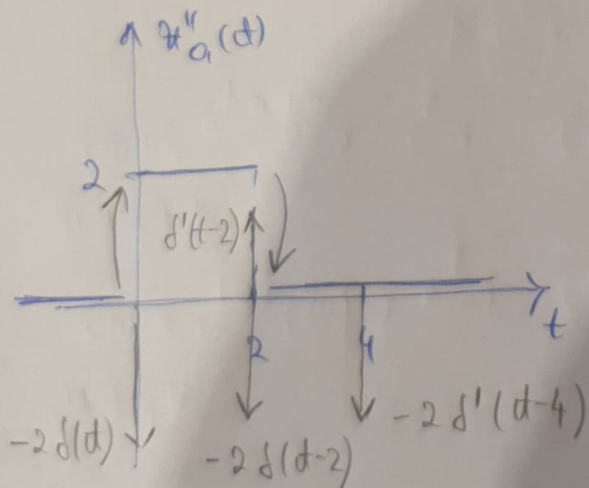
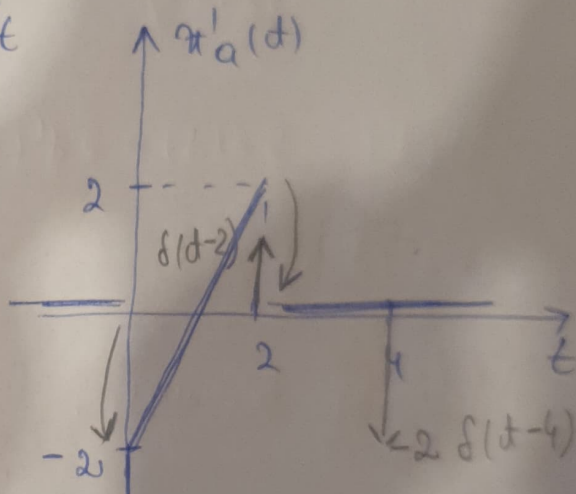
Parŕiol SS

Cole. Transf. Fourier pentru:

$$x(t) = \begin{cases} t^2 - 2t + 1, & t \in [0, 2] \\ 2, & t \in (2, 4] \\ 0, & t \in \mathbb{R} \setminus [0, 4] \end{cases}$$



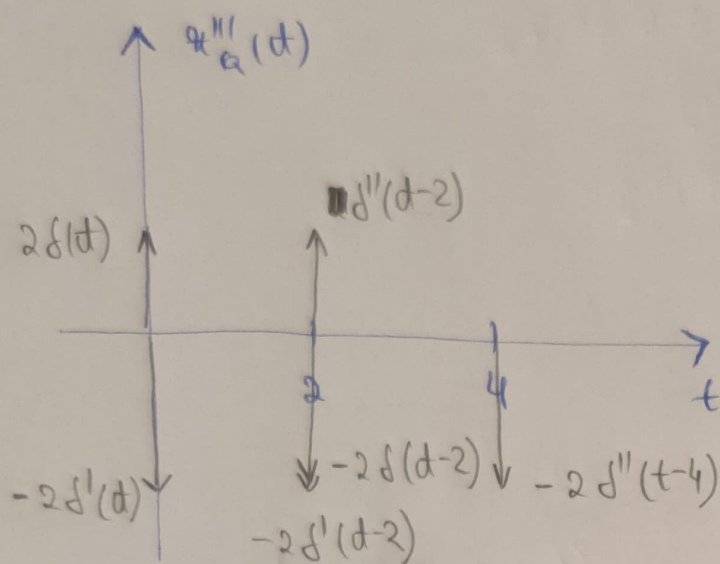
$$x'_a(t) = \begin{cases} 2t - 2, & t \in [0, 2) \\ 0, & t \in \mathbb{R} \setminus [0, 2) \end{cases}$$



$$x''_a(t) = \begin{cases} 2, & t \in (0, 2) \\ 0, & t \in \mathbb{R} \setminus (0, 2) \end{cases}$$

Găujăneanu Nicoleta Monica, 424 D

$$u'''_a(t) = 0, t \in \mathbb{R} \setminus \{0, 2, 4\}$$



$$u'''(t) = 2\delta(t) - 2\delta'(t) + \delta''(t-2) - 2\delta'(t-2) - 2\delta(t-2) - 2\delta''(t-4).$$

folosim formule: $f(t) \xrightarrow{\mathcal{F}} 1$

$$u(t-t_0) \xrightarrow{\mathcal{F}} e^{-j\omega t_0} \cdot x(\omega)$$

$\forall t_0 \in \mathbb{R}.$

$$u^{(p)}(t) \xrightarrow{\mathcal{F}} (j\omega)^{(p)} \cdot x(\omega)$$

$\forall p \in \mathbb{N}.$

Gäufönnaru Nicóla Morica, 4240

$$(j\omega)^3 \cdot x(\omega) = 2 \cdot 1 - 2 \cdot e^{-j\omega \cdot 0} \cdot 1 + (j\omega)^2 \cdot e^{-2j\omega} - 2j\omega \cdot e^{-2j\omega} - 2 \cdot e^{-2j\omega} - 2(j\omega)^2 \cdot e^{-4j\omega} \Rightarrow$$

$$\Rightarrow x(\omega) = \frac{2-2 + e^{-2j\omega} ((j\omega)^2 - 2j\omega - 2) - 2e^{-4j\omega} j^2 \omega^2}{(j\omega)^3}$$

$$x(\omega) = \frac{e^{-2j\omega} (j^2 \omega^2 - 2j\omega - 2) - 2e^{-4j\omega} j^2 \omega^2}{j^3 \omega^3}$$