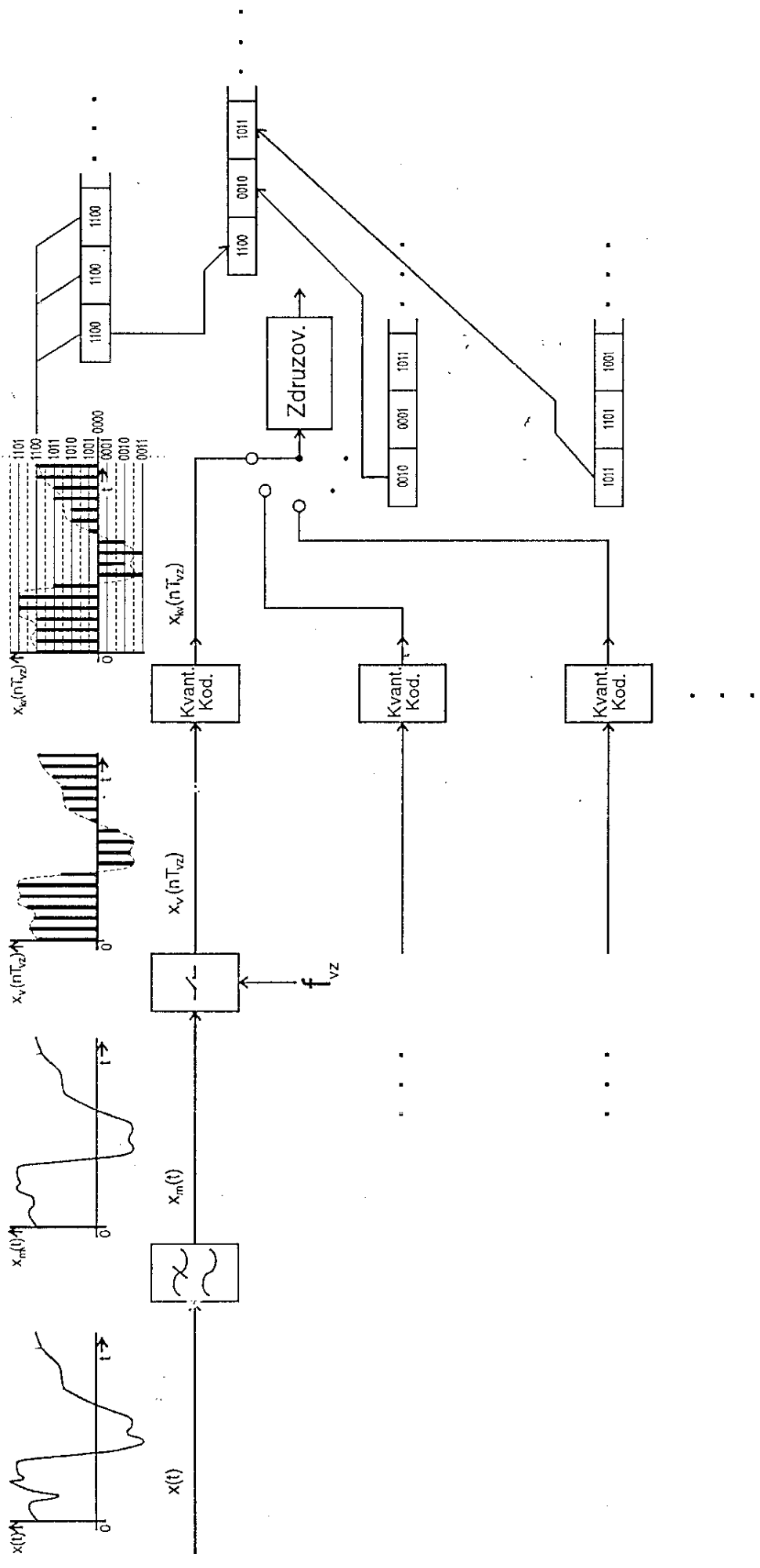
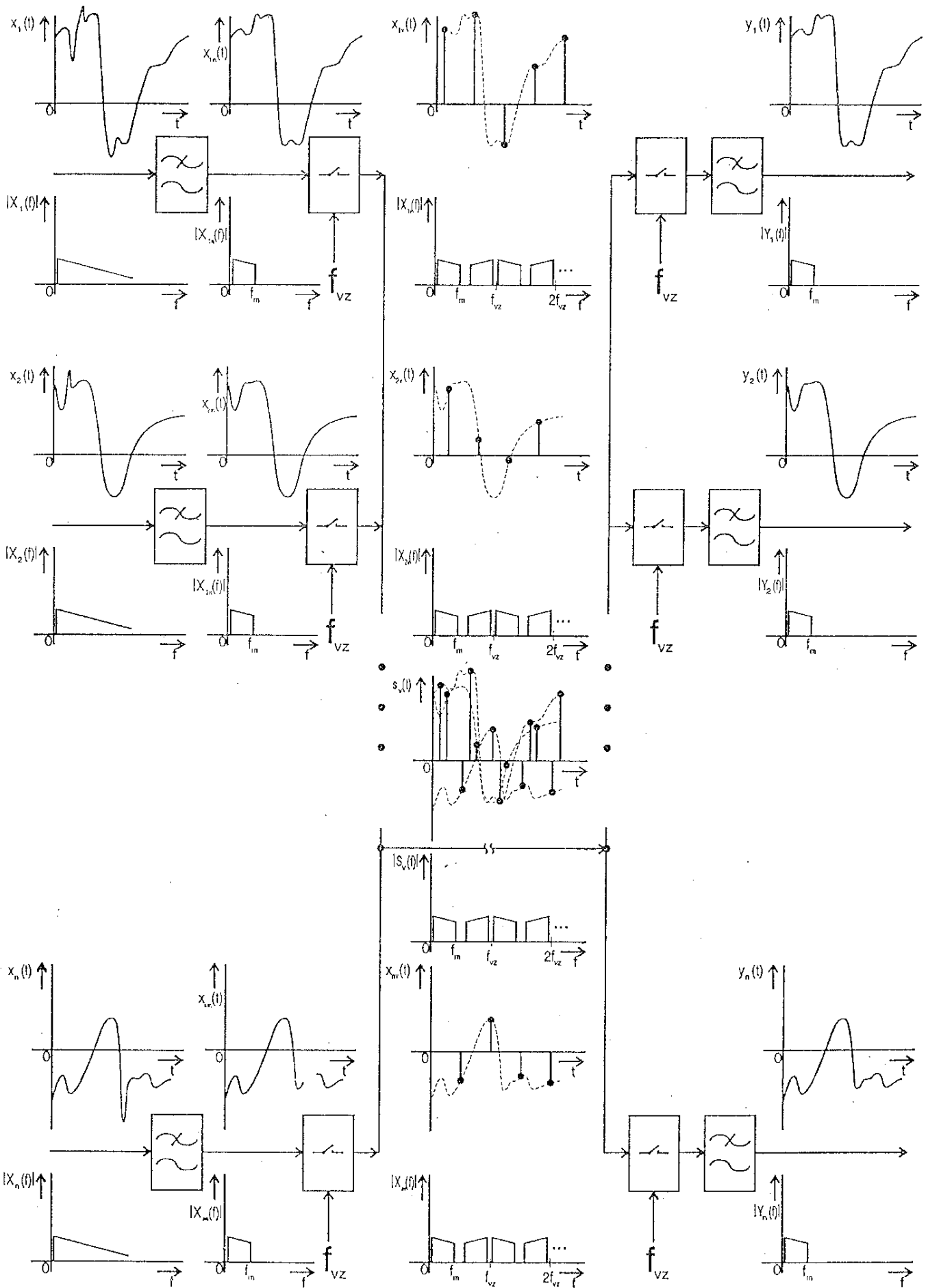


Obr.2.3



Obr.2.30



Obr.2.4

NÁZOV:

PREDMET:

ROČNÍK:

ČÍSLO:

ČÍSLO ZLOŽKY

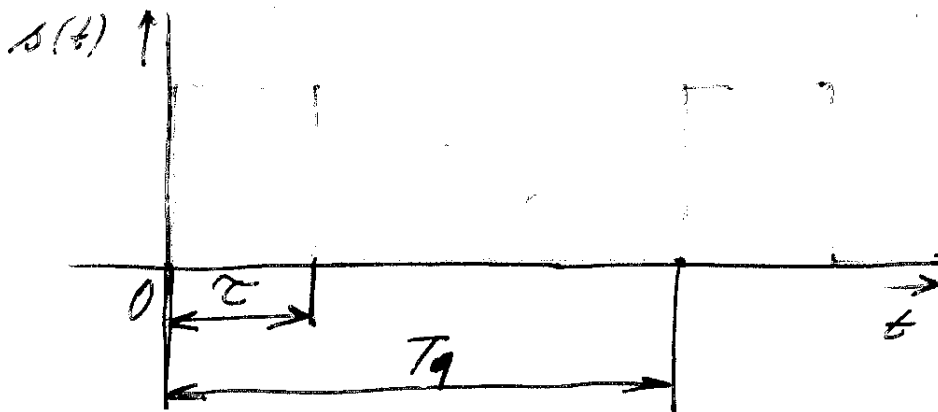
Neperiodické signály (jednovároué)

$$s(t) = s(t + nT_q) \text{ neplatí}$$

pre $t \in (-\infty; \infty)$

$$\int_{-\infty}^{\infty} |s(t)|^2 dt < \infty$$

je absolutne integrov.
a vyhovuje Dir. podm.



$$s(t) = \sum_{-\infty}^{\infty} C_m e^{jn\omega_q t}$$

exponenciálna funkcia

$$C_m = \frac{1}{T_q} \int_{-\frac{T_q}{2}}^{\frac{T_q}{2}} s(t) e^{-jn\omega_q t} dt$$

NÁZOV:

PREDMET:

ROČNÍK:

ČÍSLO:

ČÍSLO ZLOŽKY

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a)

$$s(t) = \int_{-\infty}^{\infty} S(\omega) e^{j\omega t} d\omega$$

$$S(\omega) = \frac{1}{2\pi} \int_{-\infty}^{\infty} s(t) e^{-j\omega t} dt$$

b)

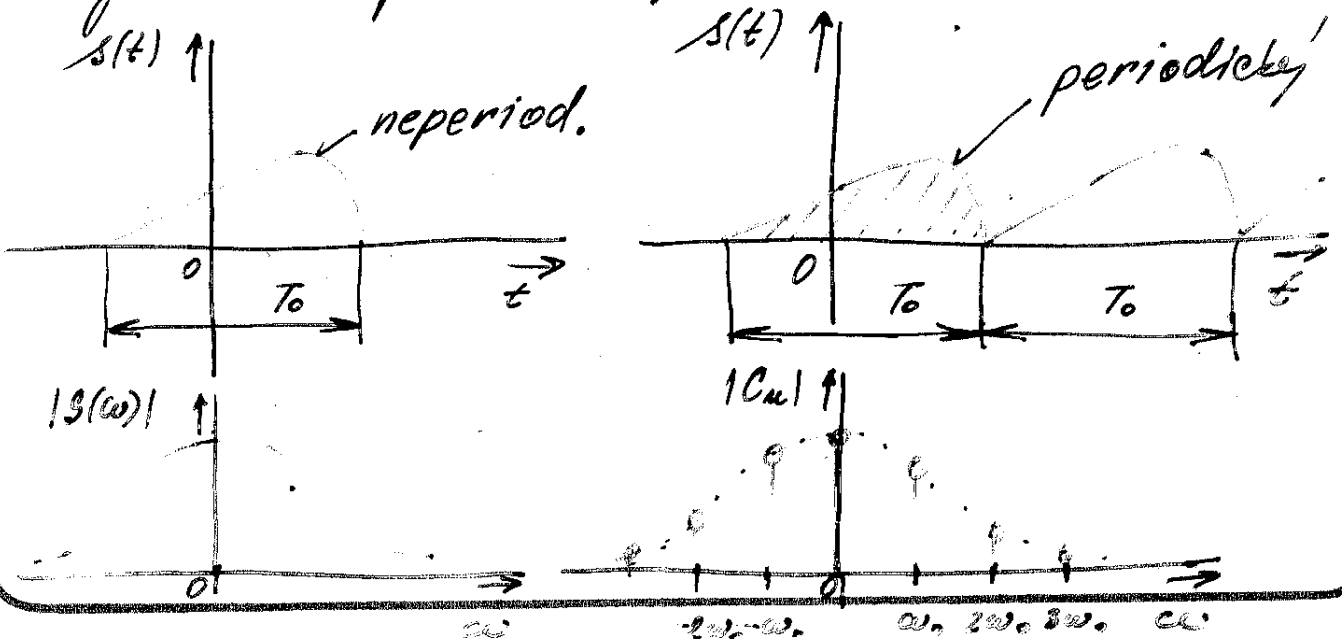
$$s(t) = \frac{1}{2\pi} \int_{-\infty}^{\infty} S(\omega) e^{j\omega t} d\omega$$

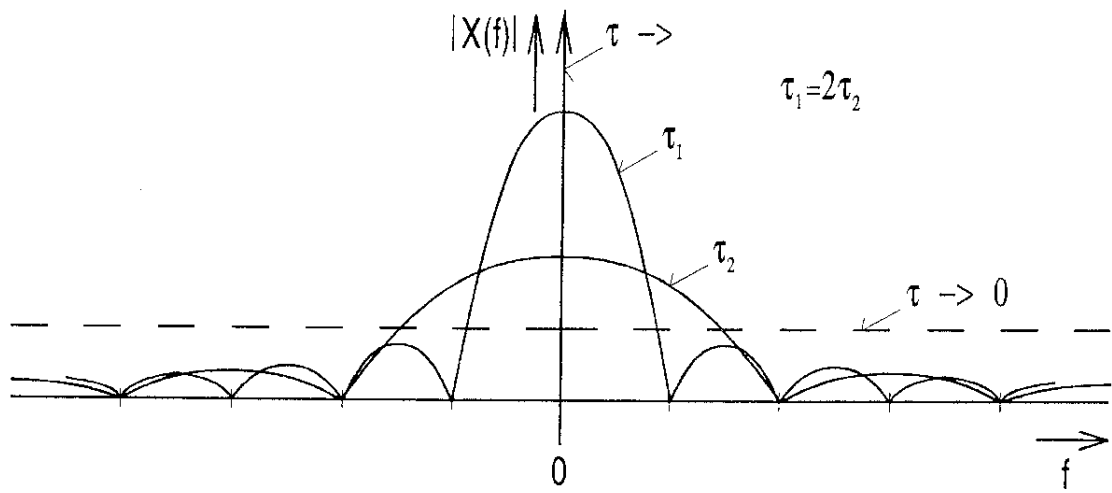
$$S(\omega) = \int_{-\infty}^{\infty} s(t) e^{-j\omega t} dt$$

$$S(\omega) = A(\omega) + jB(\omega) = |S(\omega)| e^{j\varphi(\omega)}$$

$|S(\omega)|$ - spektrálna hustota amplitúd

$\arg \varphi(\omega)$ - fázové spektrum





Obr.2.13

NÁZOV:

PREDMET:

ROČNÍK:

ČÍSLO:

ČÍSLO ZLOŽKY

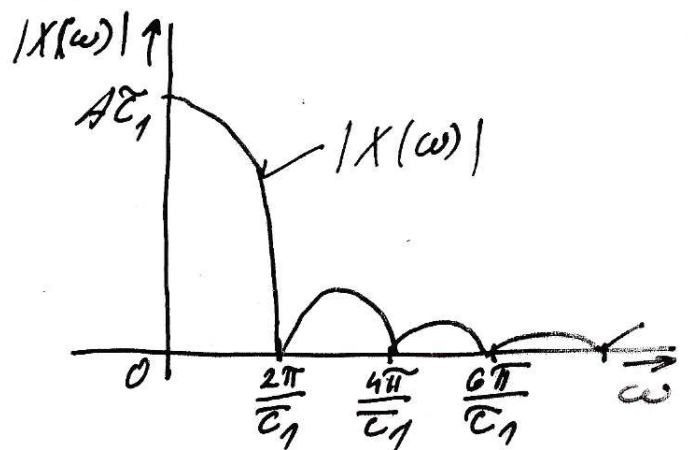
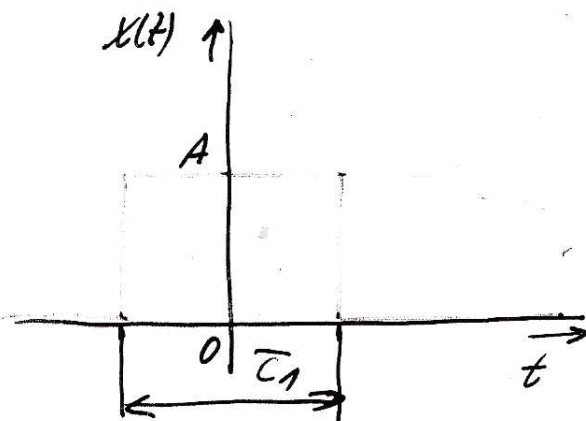
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$$F\{x(at)\} = \int_{-\infty}^{\infty} x(\tau) e^{-j\omega \frac{\tau}{a}} \cdot \frac{1}{a} d\tau = \frac{1}{a} \int_{-\infty}^{\infty} x(\tau) e^{-j\frac{\omega}{a}\tau} d\tau =$$

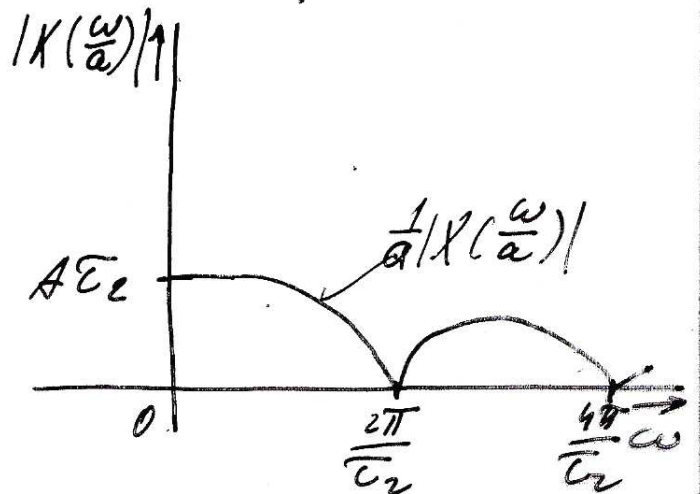
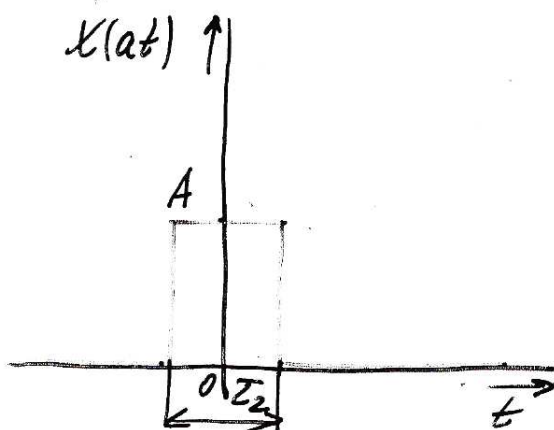
$$= \frac{1}{a} X\left(\frac{\omega}{a}\right)$$

$$x(at) \rightarrow \frac{1}{a} X\left(\frac{\omega}{a}\right)$$

Pravidný signál $x(t)$



Signál $x(at)$



NÁZOV:

PŘEDMET:

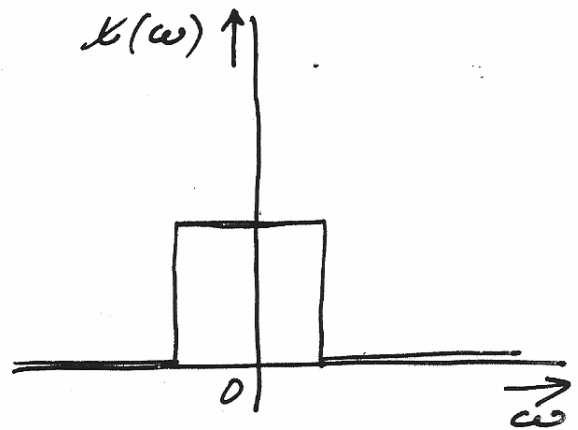
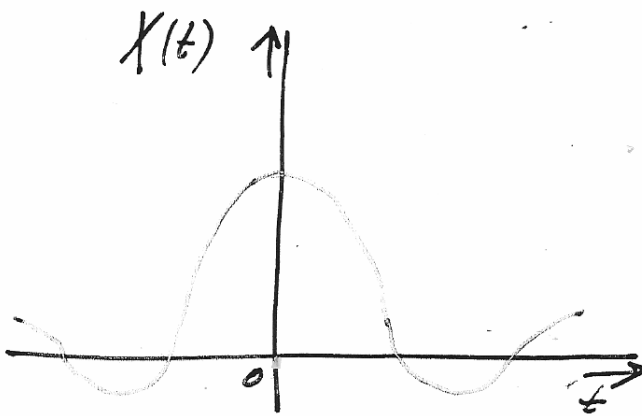
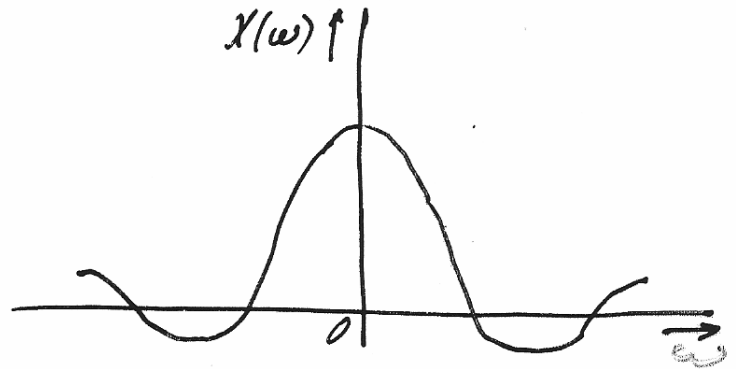
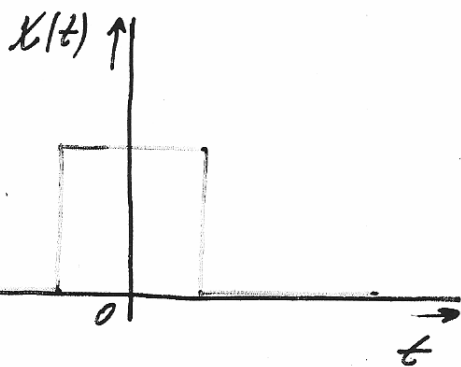
ROČNÍK:

ČÍSLO:

ČÍSLO ZLOŽKY

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$X(t)$ párná a reálná

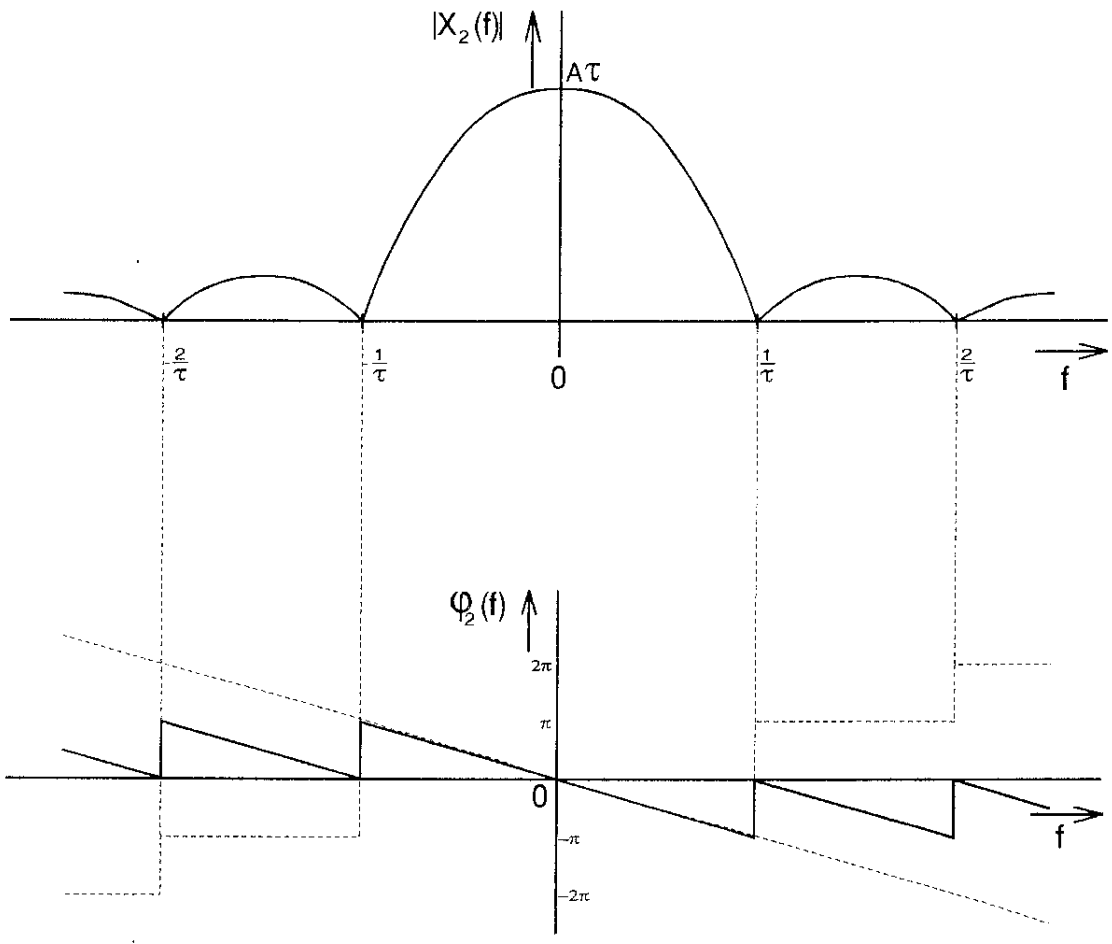


5. Věta o časovém posunutí (meshkovení) signálu

$$X(t-\tau) \rightarrow X_{\tau}(\omega) = \int_{-\infty}^{\infty} X(t-\tau) e^{-j\omega t} dt$$

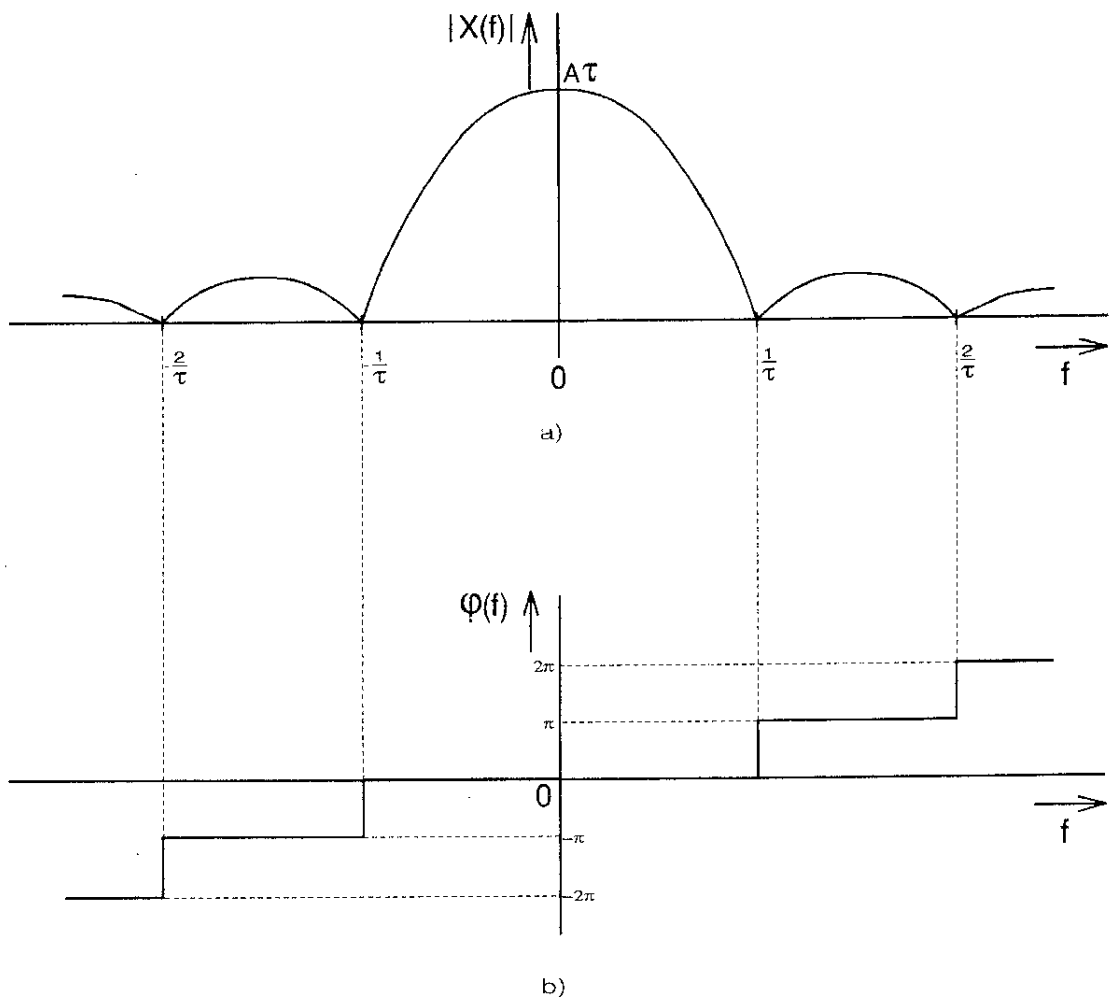
$$t-\tau = t' \rightarrow dt = dt'$$

$$X_{\tau}(\omega) = \int_{-\infty}^{\infty} X(t') e^{-j\omega(t'+\tau)} dt' = e^{-j\omega\tau} \int_{-\infty}^{\infty} X(t') e^{-j\omega t'} dt' =$$

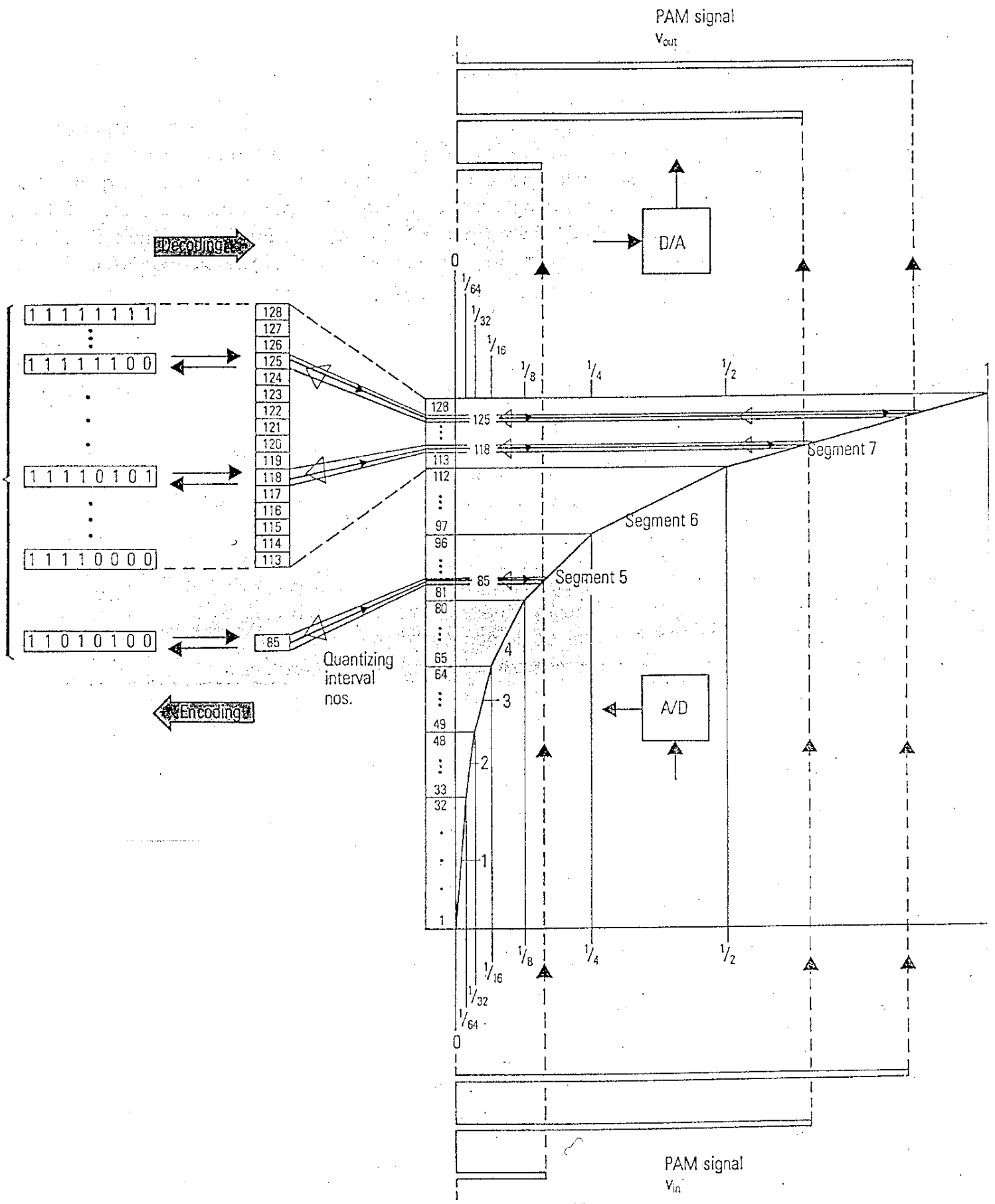


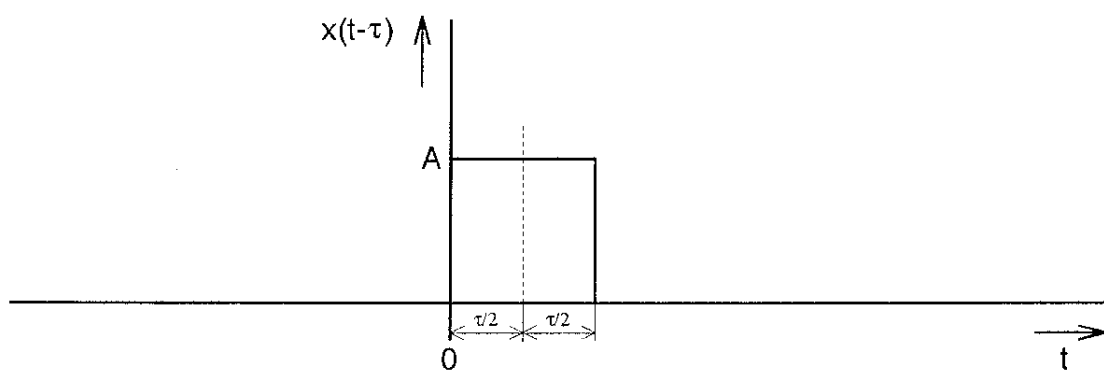
b)

Obr.2.17

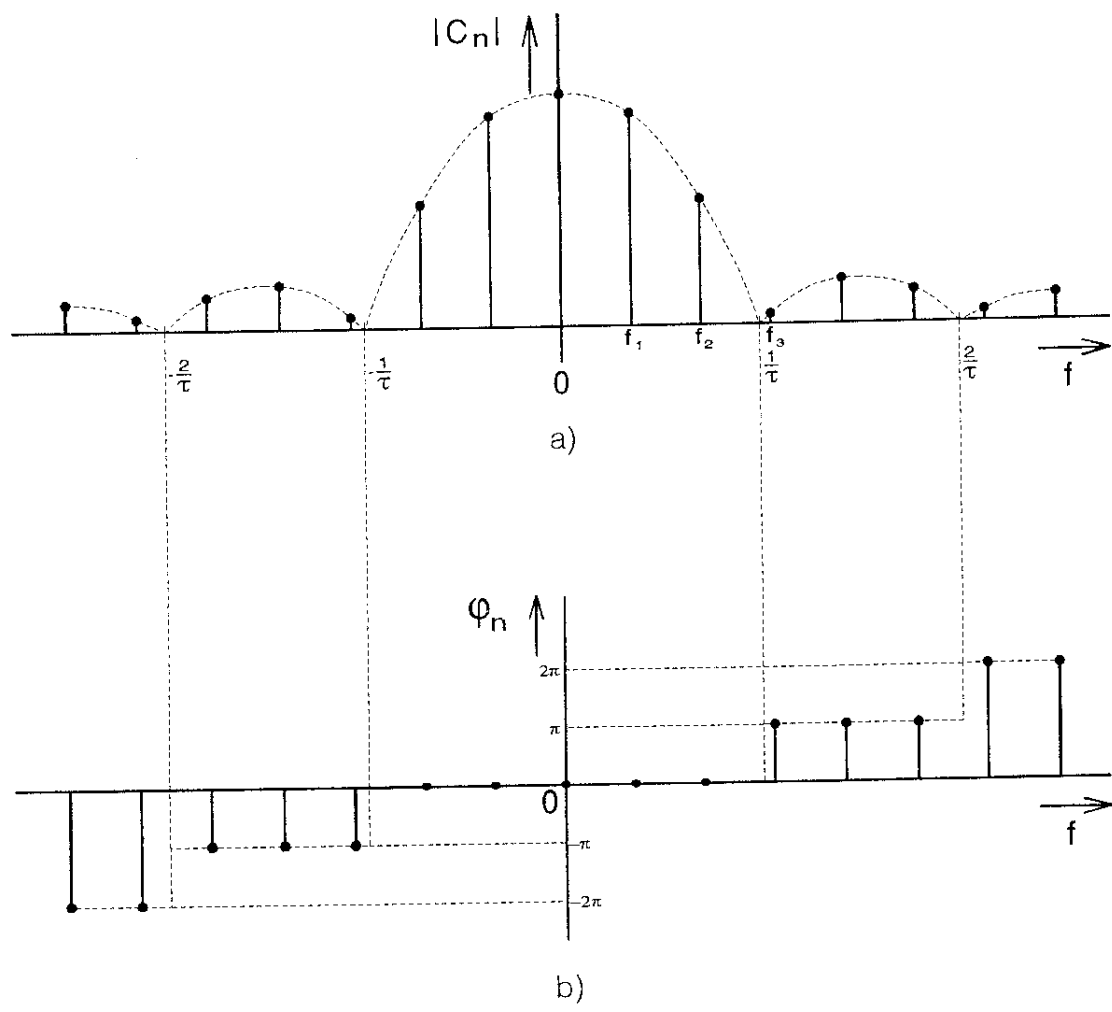


Obr.2.12

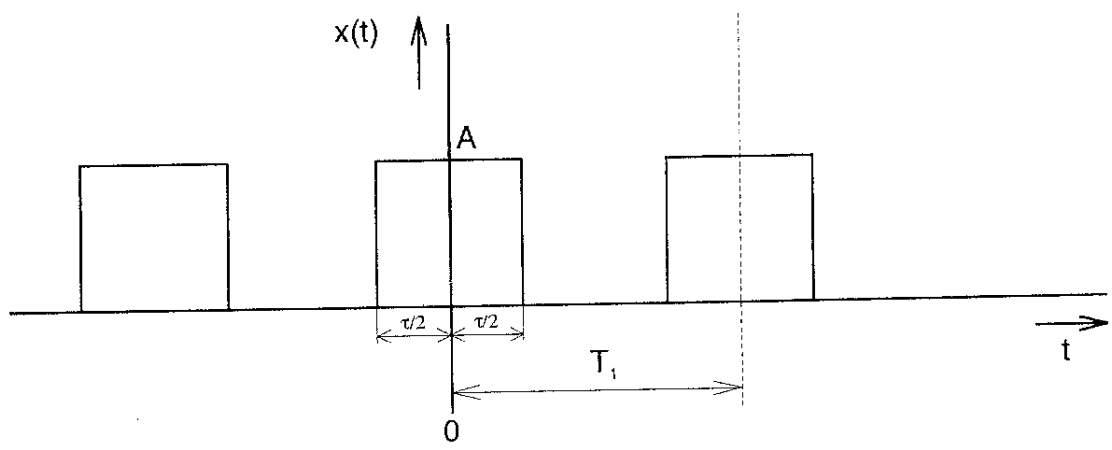




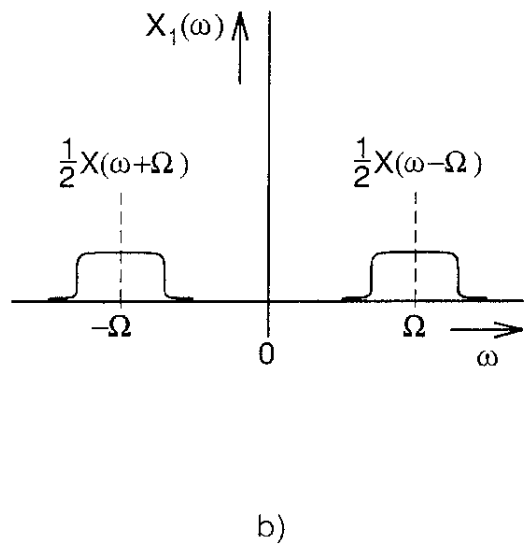
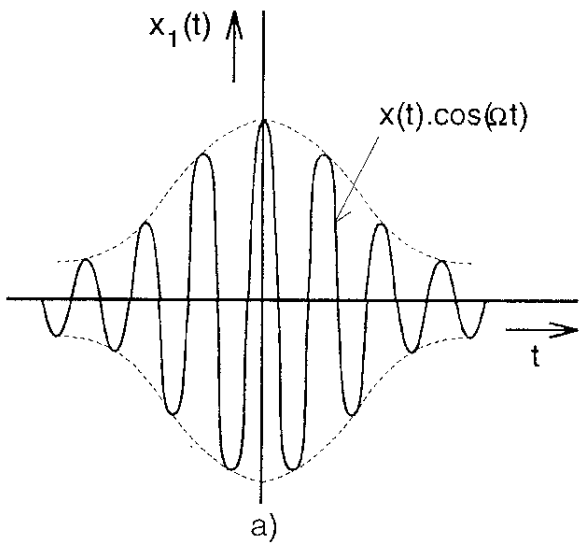
Obr.2.16



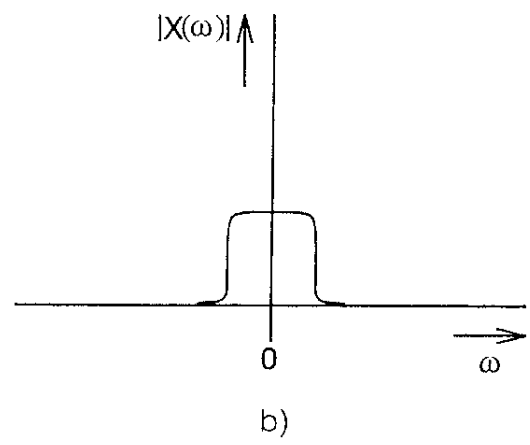
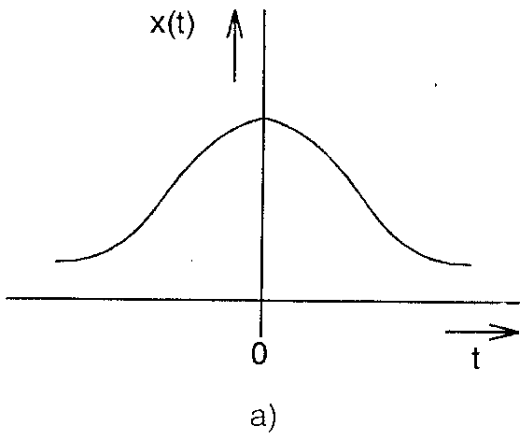
Obr.2.9



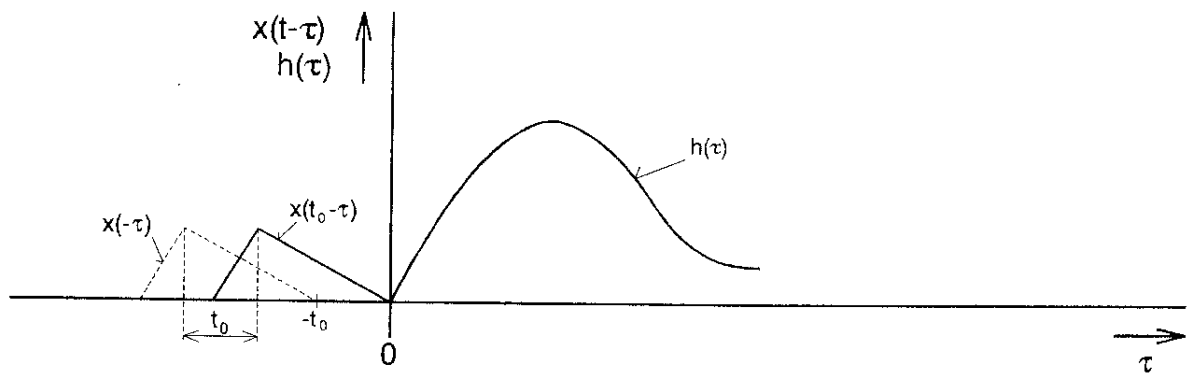
Obr.2.8



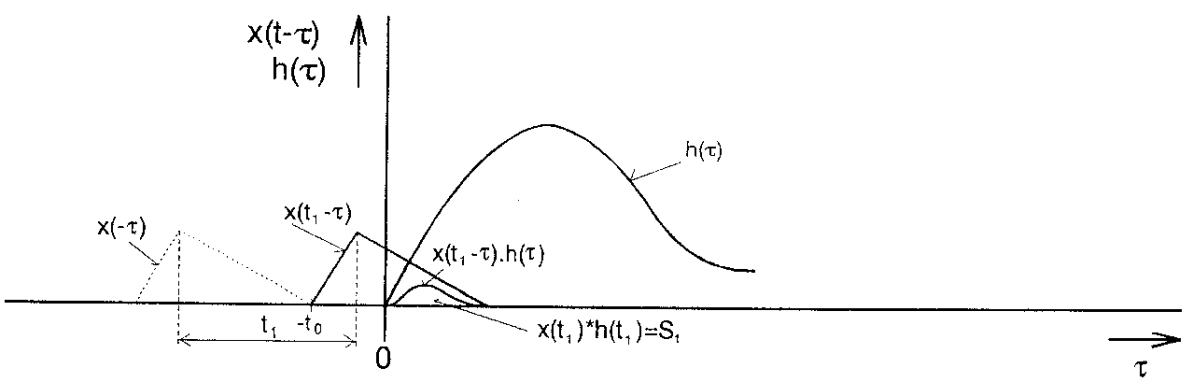
Obr.2.15



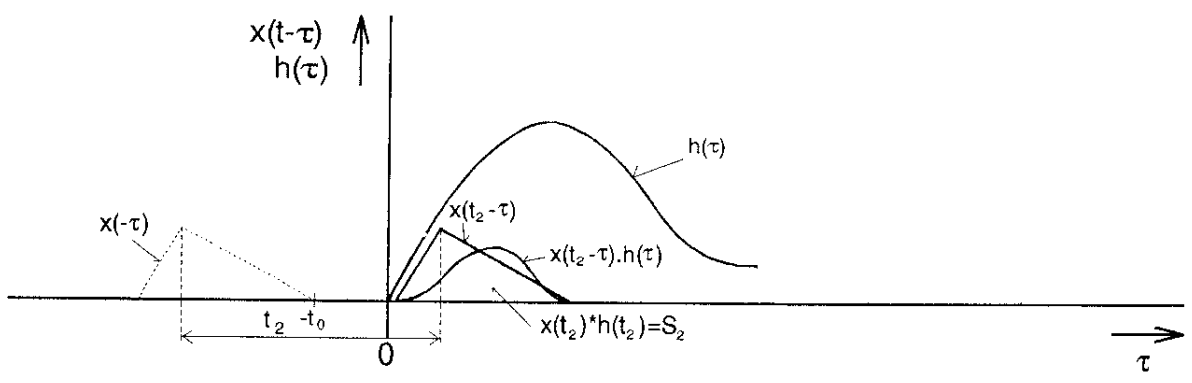
Obr.2.14



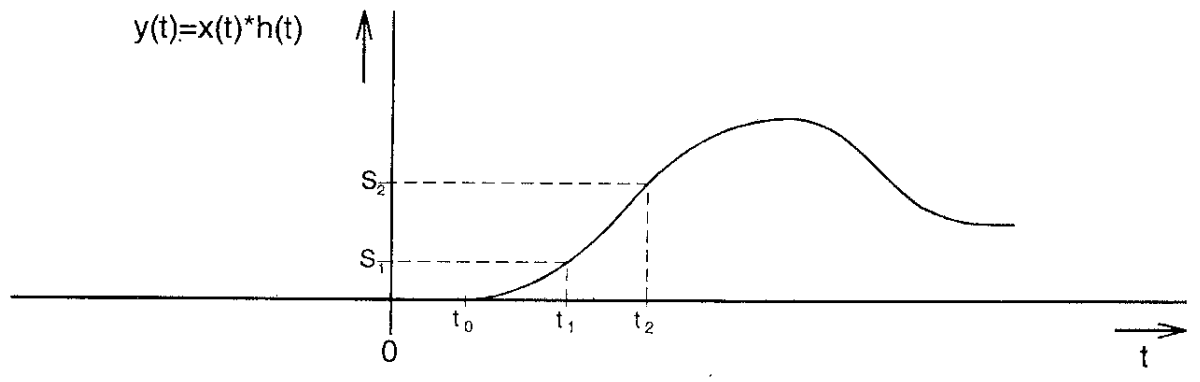
a)



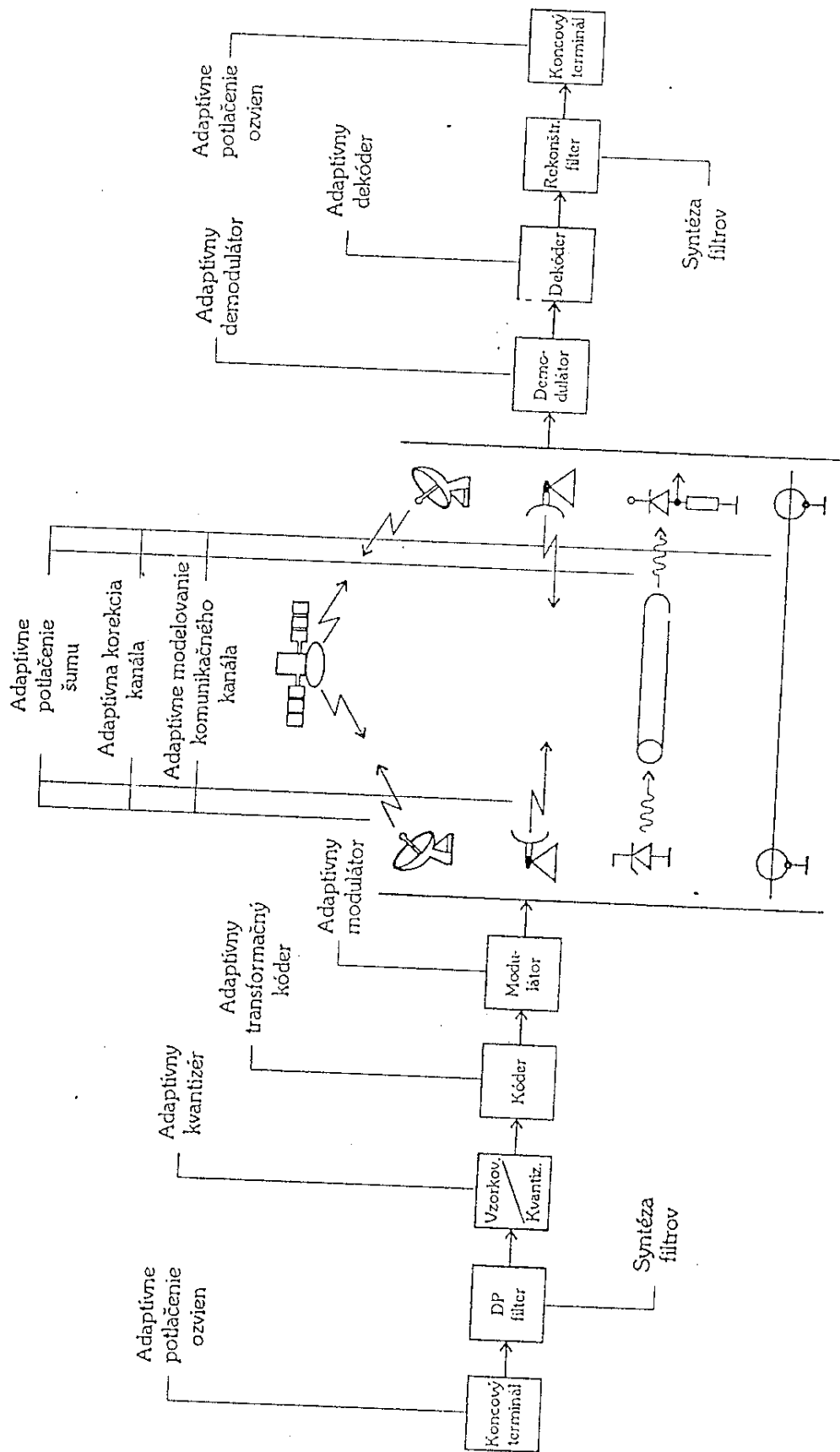
b)



c)



d)



Obr.1

NÁZOV:

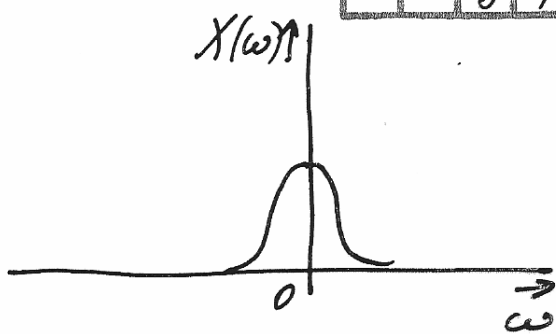
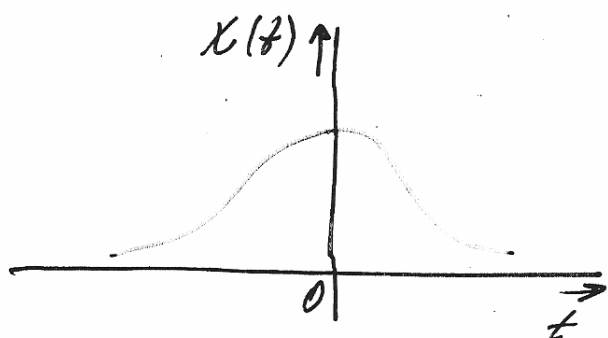
PŘEDMET:

ROČNÍK:

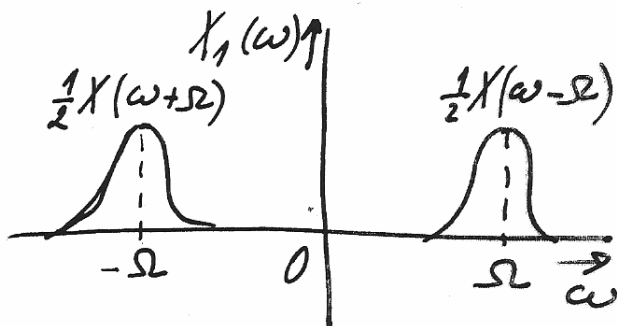
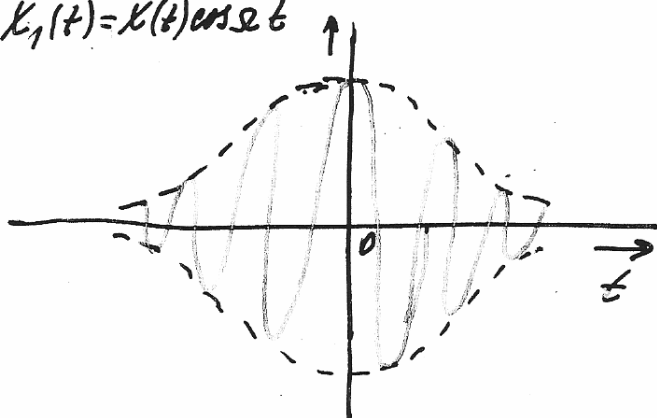
ČÍSLO:

ČÍSLO ZLOŽKY

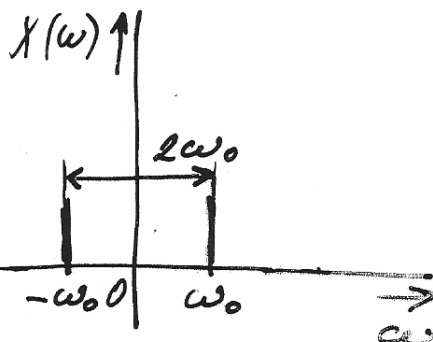
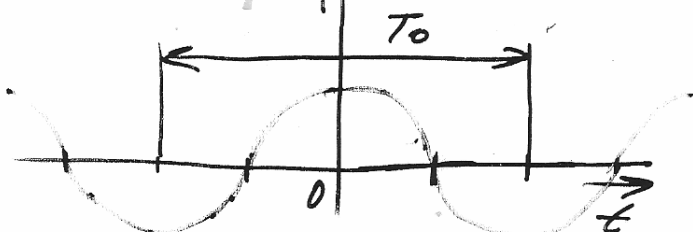
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$X_1(t) = X(t) \cos \Omega t$



$X(t) = A \cos \omega_0 t$



$X_1(t) = X(t) \cos \Omega t = A \cos \omega_0 t \cos \Omega t$

