$m = \text{mean}(V)$ V è un vettore

$m_1 = \text{mean}(M)$ M è matrice

$m_r = \text{mean}(M, 1)$

help , doc

$m_{TOT} = \text{mean}(\text{mean}(M))$

$V = M(:)$ $\longrightarrow$ da matrice a vett.

$m_{TOT} = \text{mean}(V)$;

Function $y = \text{ottimo}(x)$

$y = \dots\dots$

Function $[y, err] = \text{ottimo}(x)$

:

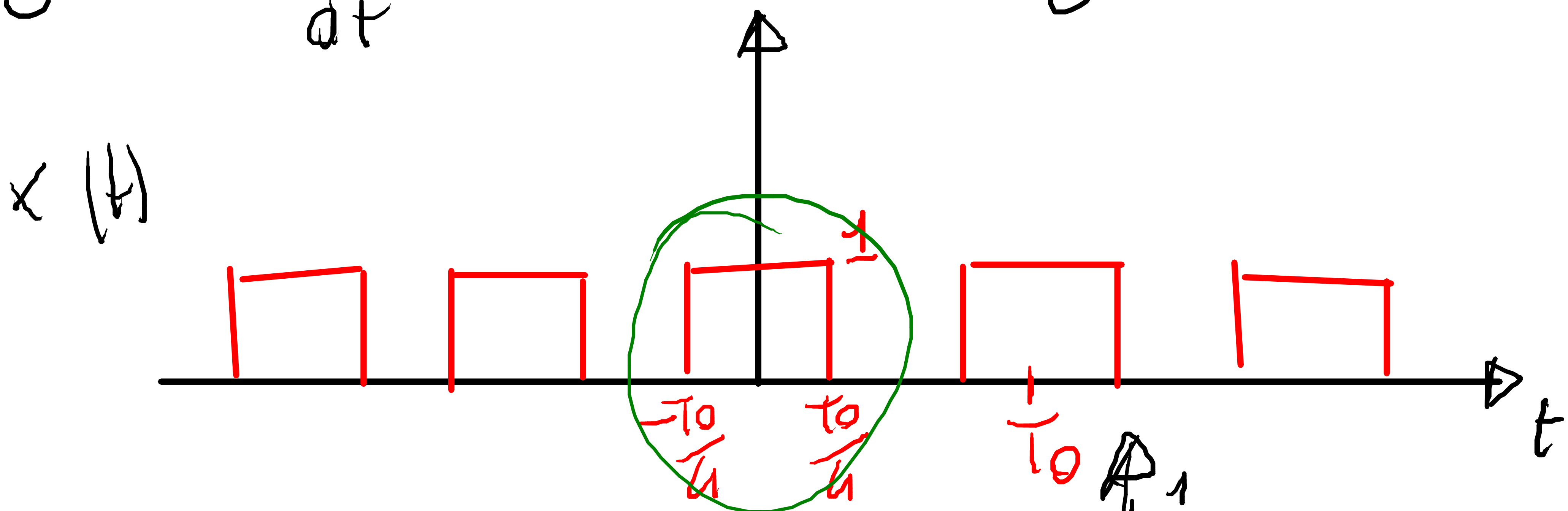
1 s scalar

$T_0 = 2 \qquad dt = 0{,}01$

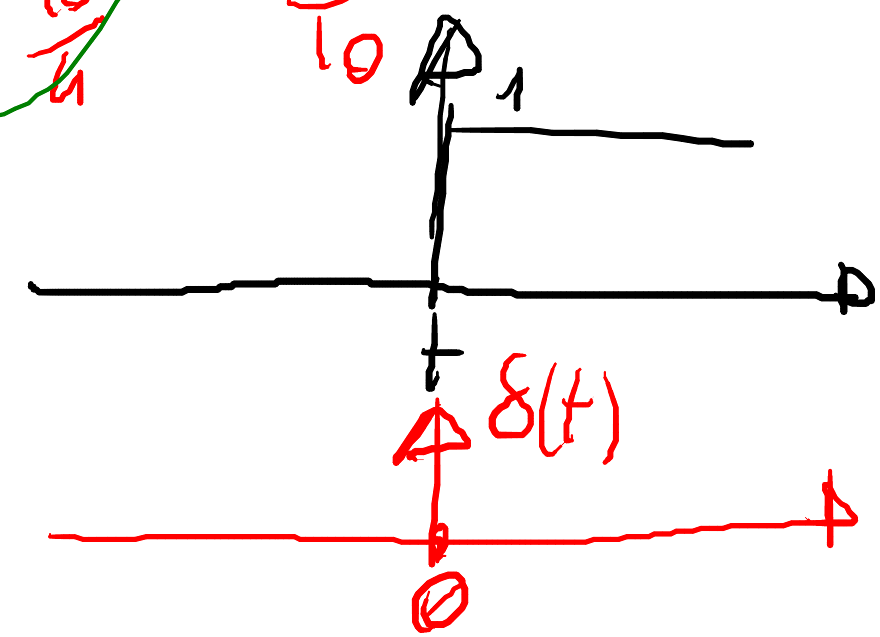
$N_0 = T_0 / dt$

$$x(t) \longrightarrow S_n$$

$$y(t) = \frac{d}{dt}x(t) \longrightarrow Y_n = g(S_n) \;?$$

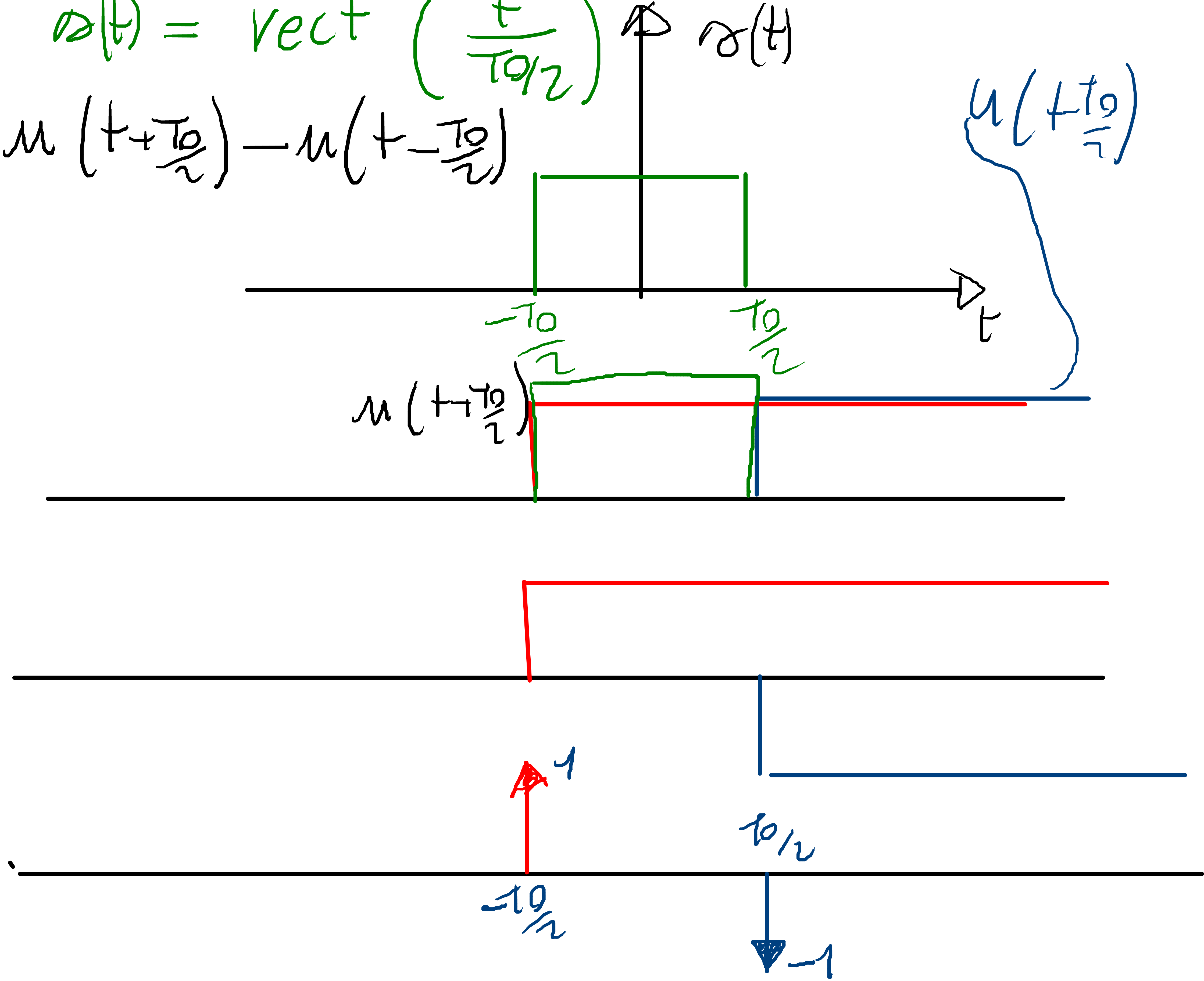


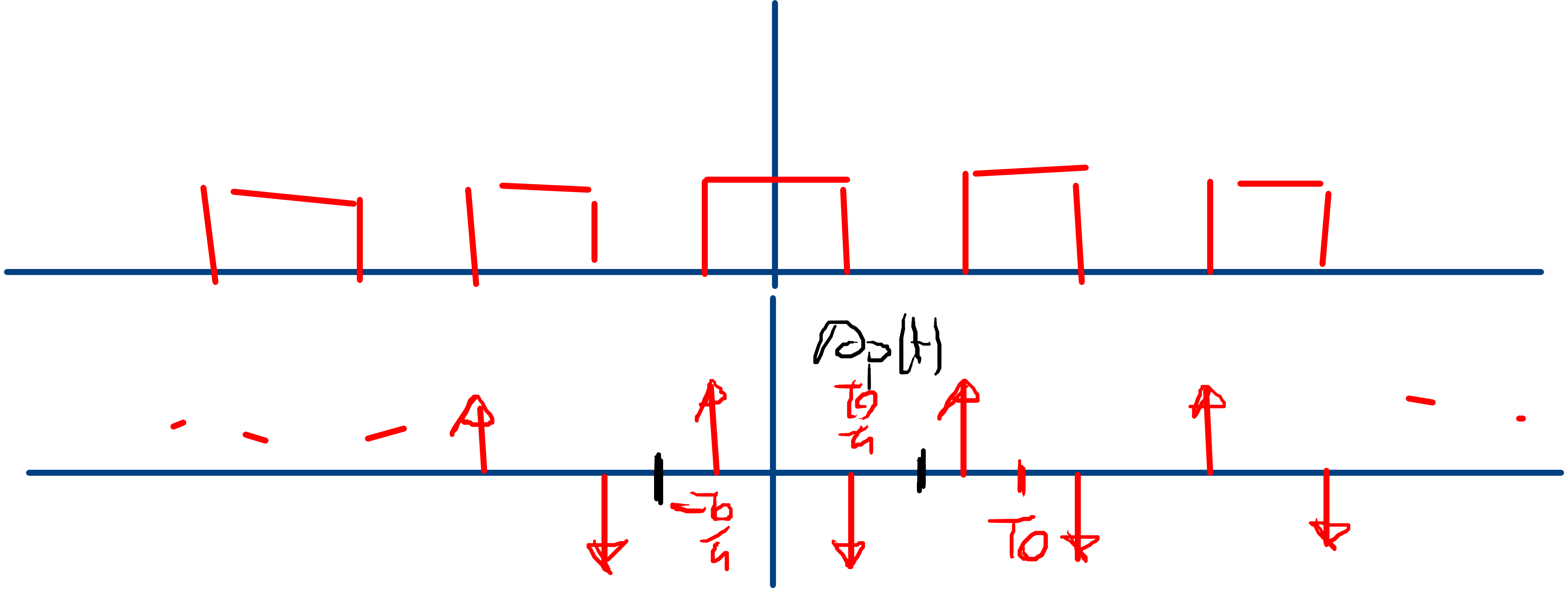
$$\delta(t) = \frac{d}{dt}u(t)$$



$$x(t) = \mathrm{rect}\left(\frac{t}{T_0/2}\right)$$

$$x(t) = u\left(t+\frac{T_0}{2}\right) - u\left(t-\frac{T_0}{2}\right)$$





$$S_n = \frac{1}{T_0}\int_{-\frac{T_0}{2}}^{\frac{T_0}{2}} p_p(t)\, e^{-j 2\pi n \frac{t}{T_0}}\, dt =$$

$$= \frac{1}{T_0}\int_{-\frac{T_0}{2}}^{\frac{T_0}{2}} \left(\delta\left(t+\frac{T_0}{4}\right) - \delta\left(t-\frac{T_0}{4}\right)\right) e^{-j 2\pi n \frac{t}{T_0}}\, dt =$$

$$\int f(x)\, \delta(x-x_0)\, dx = f(x_0)$$

$$= \frac{1}{T_0}\left(e^{-j 2\pi n\left(-\frac{T_0}{4}\right)/T_0} - e^{-j 2\pi n \frac{T_0}{4}/T_0}\right) =$$

$$= \frac{1}{T_0}\left(e^{+j\frac{\pi n}{2}} - e^{-j\frac{\pi n}{2}}\right) =$$

$$= \frac{1}{T_0}\, 2j \sin\frac{\pi n}{2} \quad = Y_n$$

$$X_n = \frac{1}{2}\operatorname{sinc}\left(\frac{n}{2}\right)$$

$$|Y_n| / |X_n| \qquad \angle Y_n - \angle X_n$$

$$x(t) = \sum_{n=-\infty}^{\infty} S_n \, e^{j2\pi \frac{nt}{T_0}}$$

$$y(t) = \frac{d}{dt} x(t) = \frac{d}{dt} \sum_{n=-\infty}^{\infty} S_n \, e^{j2\pi \frac{nt}{T_0}} =$$

$$= \sum_{n=-\infty}^{\infty} S_n \cdot \frac{d}{dt}\left(e^{j2\pi \frac{nt}{T_0}}\right) = \sum_{n=-\infty}^{\infty} j\frac{2\pi n}{T_0} S_n \, e^{j2\pi \frac{nt}{T_0}}$$

$$Y_n = j\frac{2\pi n}{T_0} S_n \qquad |Y_n| = \frac{2\pi |n|}{T_0} |S_n|$$