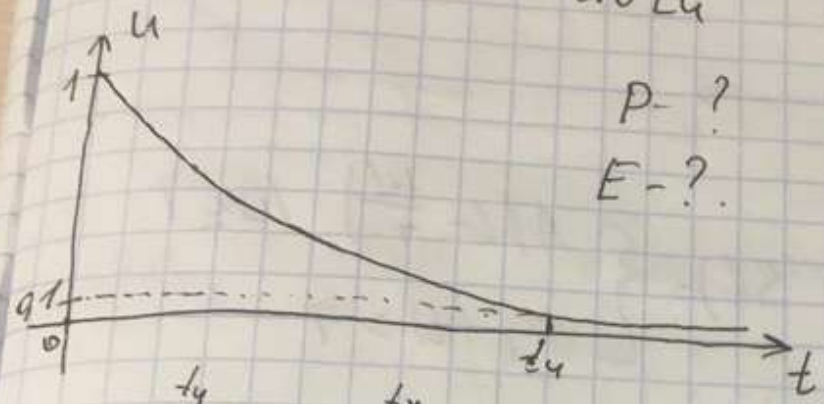
$P_{1ом} = U^2$ $\quad E = U^2 t$

$P = U_0^2$ $\quad E = U_0^2 t_и$



P - ?

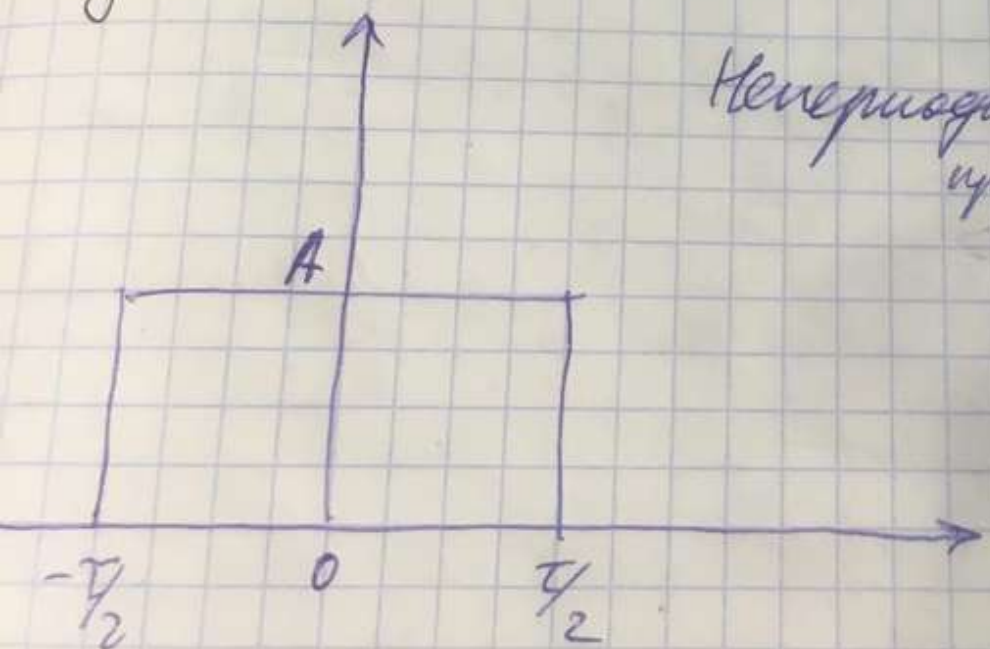
E - ?.

0,1 от Max.

$$E = \int_0^{t_и} P = \int_0^{t_и} U_0^2 \, dt = U_0^2 t \Big|_0^{t_и} =$$

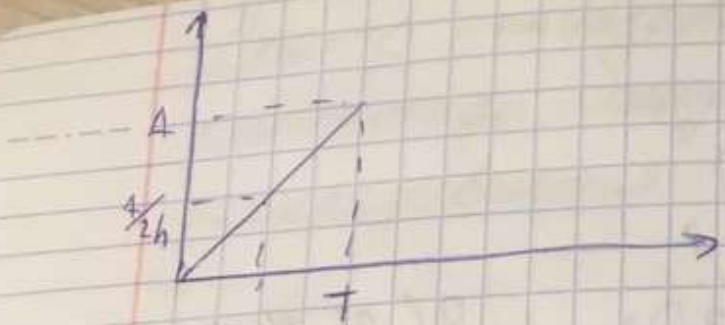
$$= U_0^2 (t_и - 0) = U_0^2 t_и.$$

Дз в тетради (не делал)

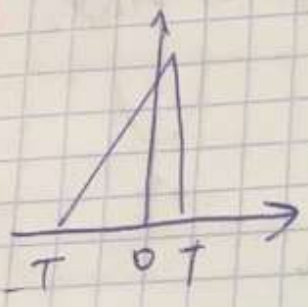


Непериодический сигнал.

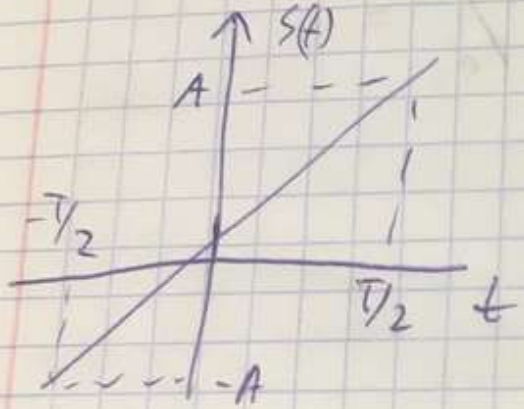
$$S(t) = \begin{cases} A, & |t| \le \tau/2 \\ 0, & |t| > \tau/2 \end{cases}$$

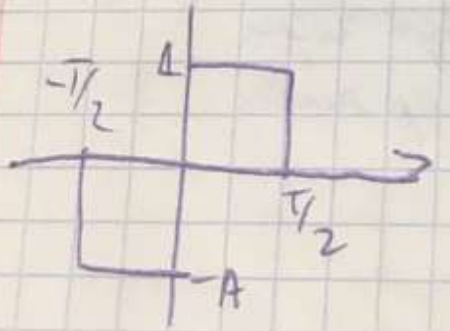


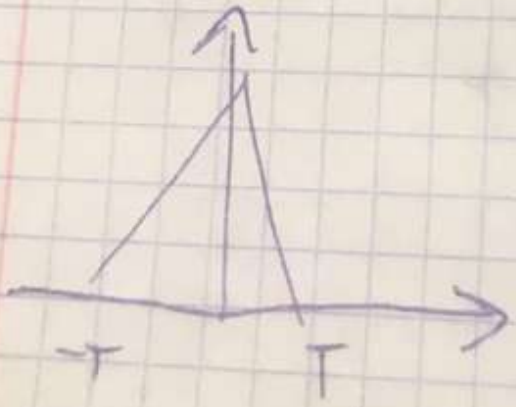
$$S(t) = \begin{cases} A \cdot \frac{t}{T}; & 0 < t < T \\ 0; & t < 0; \ t > T \end{cases}$$

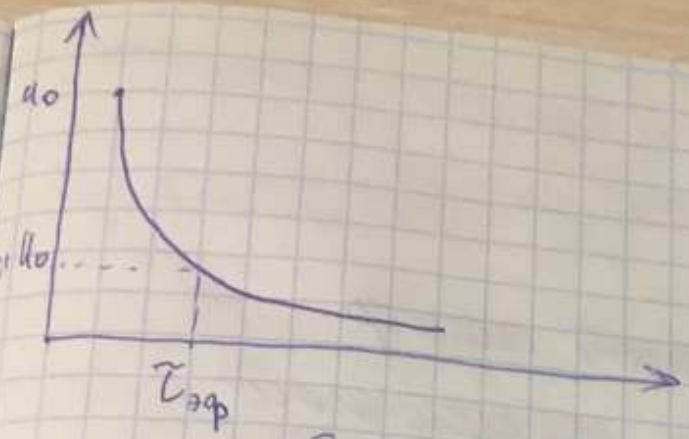


$$S(t) = \begin{cases} A\left(1 - \frac{|t|}{T}\right), & |t| \le T \\ 0, & |t| > T \end{cases}$$







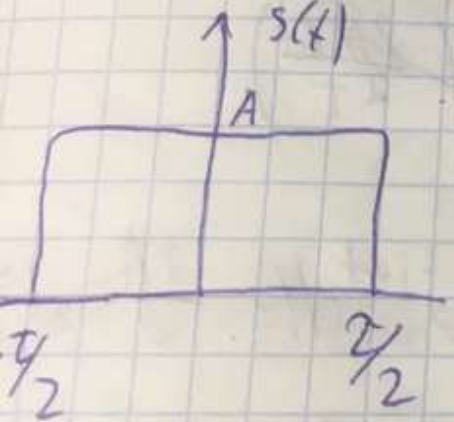


$$S(t) = \begin{cases} u_0 e^{-\alpha t}, & t \geq 0 \\ 0, & t < 0 \end{cases}$$

$$u_0 e^{-\alpha t} = 0{,}1\,u_0$$

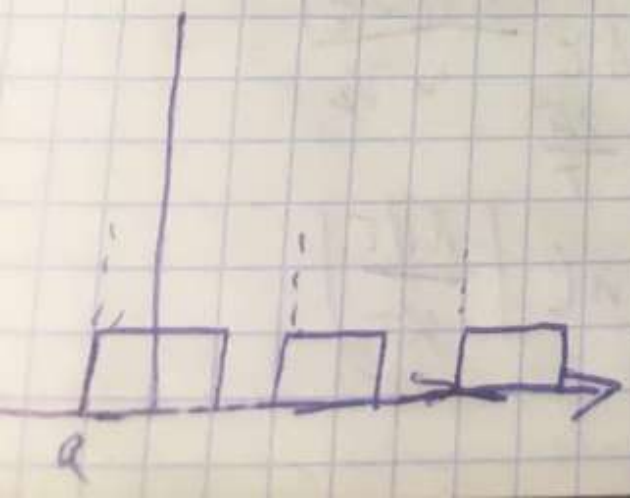
$$e^{-\alpha t} = 0{,}1.$$

$$t = \frac{\ln(0{,}1)}{-\alpha} = \frac{2{,}3}{\alpha}.$$



$$P = |S(t)|^2$$

$$E = \int_{-\tau/2}^{\tau/2} |S(t)|^2 dt = A^2 t \Big|_{-\tau/2}^{\tau/2} = A^2 \cdot \tau.$$



$$S(\omega_n) = \frac{1}{T} \int_{-\tau/2}^{\tau/2} s(t) \cdot e^{-j\omega_n t} dt =$$

$$= \frac{1}{T} \int_{-\frac{\tau}{2}}^{\frac{\tau}{2}} A e^{-j\omega_n t} dt =$$