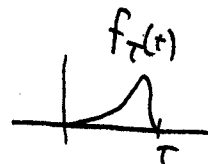


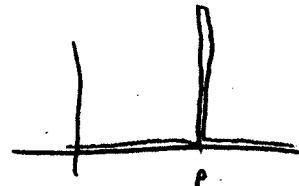
Week 11 summary:

- If $f(t)$ is periodic with period T and "window"



$$\text{then } F(s) = F_T(s) \frac{1}{1 - e^{-sT}} = F_T(s) [1 + e^{-sT} + e^{-2sT} + e^{-3sT} + \dots]$$

- Delta function: $\delta_p(t) = \begin{cases} \infty & t=p \\ 0 & t \neq p \end{cases} = \lim_{\epsilon \rightarrow 0} \delta_p^\epsilon(t)$



* Not really a function

* Is the "derivative" of $H_p(t)$

$$* \int_{-\infty}^{\infty} \delta_p(t) dt = 1, \quad \int_{-\infty}^{\infty} \delta_p(t) f(t) dt = f(p)$$

$$* \mathcal{L}(\delta_0(t))(s) = 1, \quad \mathcal{L}(\delta_p(t))(s) = e^{-sp}$$

* Models a "unit impulse force."