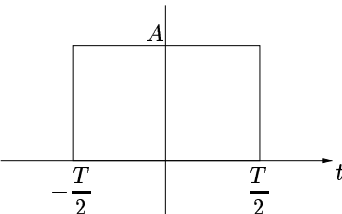
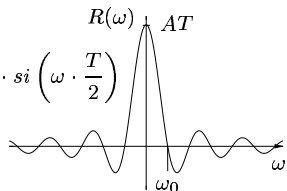
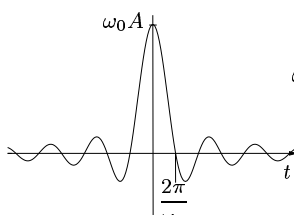
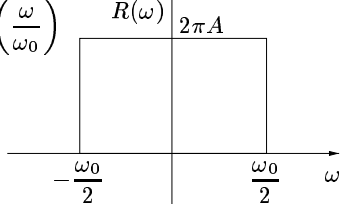
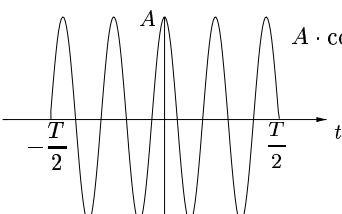
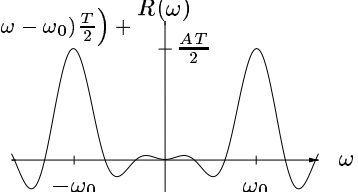
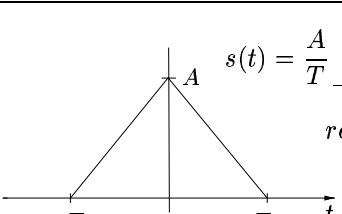
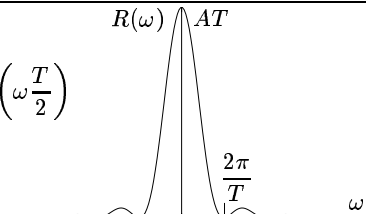
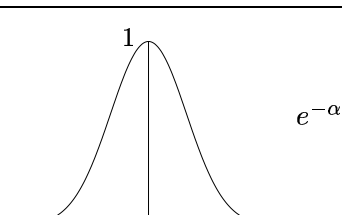
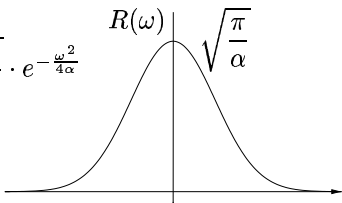
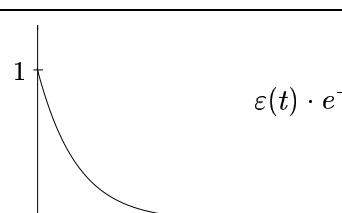
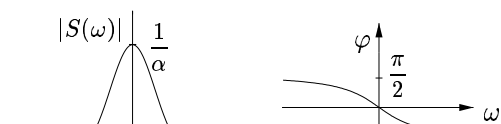
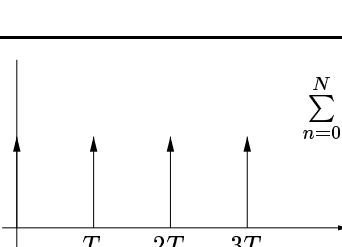


Fourier Korrespondenzen

$$s(t) \longleftrightarrow S(\omega) = R(\omega) + jX(\omega)$$

1	 $A \cdot \text{rect}\left(\frac{t}{T}\right)$	$\omega_0 = \frac{2 \cdot \pi}{T}$ $R(\omega) = A \cdot T \cdot \text{si}\left(\omega \cdot \frac{T}{2}\right)$ $X(\omega) = 0$ 
2	 $\omega_0 A \cdot \text{si}\left(\frac{\omega_0}{2} \cdot t\right)$	$R(\omega) = 2\pi A \cdot \text{rect}\left(\frac{\omega}{\omega_0}\right)$ $X(\omega) = 0$ 
3	 $A \cdot \cos(\omega_0 t) \cdot \text{rect}\left(\frac{t}{T}\right)$	$R(\omega) = \frac{AT}{2} \left[ \text{si}\left((\omega - \omega_0)\frac{T}{2}\right) + \text{si}\left((\omega + \omega_0)\frac{T}{2}\right) \right]$ 
4	 $s(t) = \frac{A}{T} \int_{-\infty}^t \text{rect}\left(\frac{t+\frac{T}{2}}{T}\right) - \text{rect}\left(\frac{t-\frac{T}{2}}{T}\right) dt$	$R(\omega) = AT \cdot \text{si}^2\left(\omega \frac{T}{2}\right)$ 
5	 $e^{-\alpha t^2}$	$R(\omega) = \sqrt{\frac{\pi}{\alpha}} \cdot e^{-\frac{\omega^2}{4\alpha}}$ 
6	 $\varepsilon(t) \cdot e^{-\alpha t}$	$S(\omega) = \frac{1}{\alpha + j\omega}$ 
7	 $\sum_{n=0}^N \delta(t - nT)$	$\sum_{n=0}^N e^{-jn\omega T} = e^{-jN\omega \frac{T}{2}} \cdot \frac{\sin\left((N+1) \cdot \omega \frac{T}{2}\right)}{\sin\left(\omega \frac{T}{2}\right)}$ 