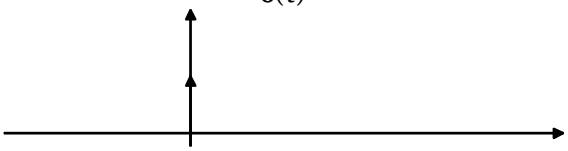
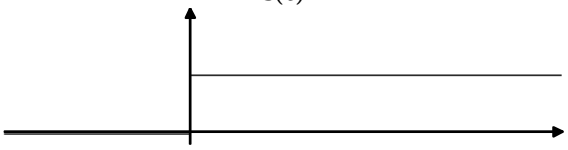
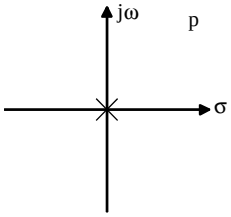
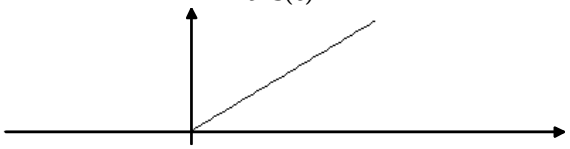
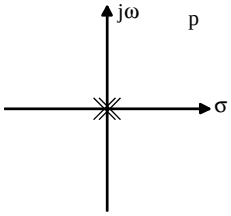
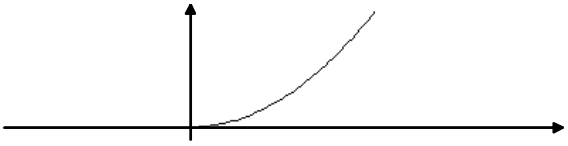
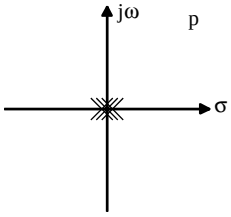
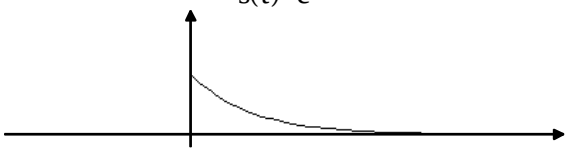
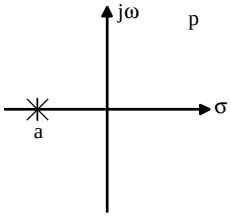
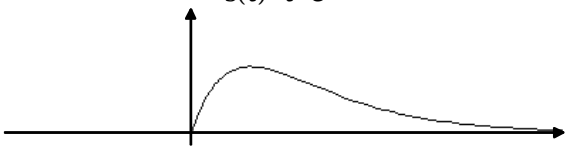
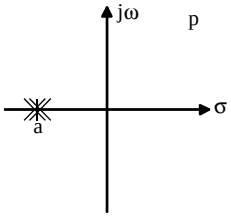
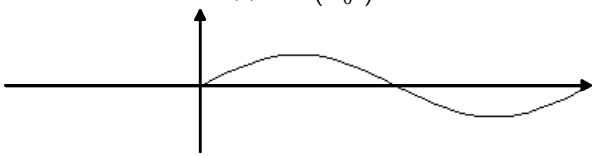
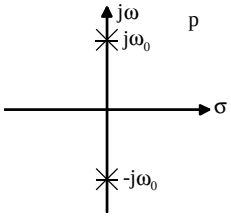
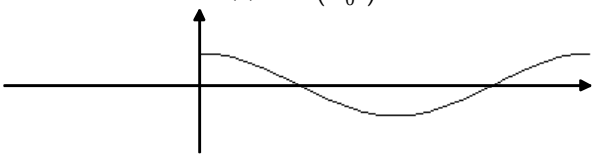
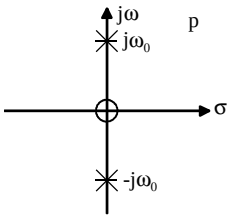
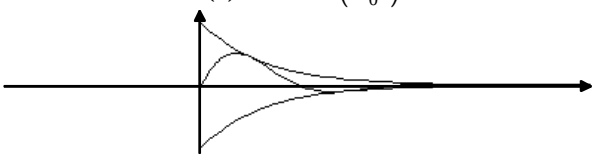
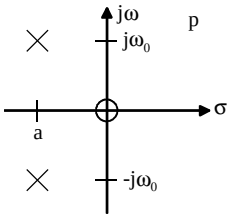
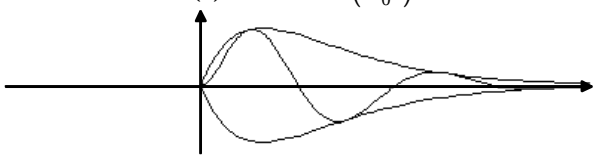
LAPLACE-Transformation einfacher Funktionen

von Gerald Meier

f(t)	F(p)
$\delta(t)$ 	1
$s(t)$ 	$\frac{1}{p}$ 
$t \cdot s(t)$ 	$\frac{1}{p^2}$ 
$\frac{1}{2} t^2 \cdot s(t)$ 	$\frac{1}{p^3}$ 
$s(t) \cdot e^{at}$ 	$\frac{1}{p-a}$ 
$s(t) \cdot t \cdot e^{at}$ 	$\frac{1}{(p-a)^2}$ 

f(t)	F(p)	
$s(t)\cdot\sin(\omega_0 t)$ 	$\frac{\omega_0}{(p^2+\omega_0{}^2)}$	
$s(t)\cdot\cos(\omega_0 t)$ 	$\frac{p}{(p^2+\omega_0{}^2)}$	
$s(t)\cdot e^{at}\cdot\sin(\omega_0 t)$ 	$\frac{\omega_0}{(p-a)^2+\omega_0{}^2}$	
$s(t)\cdot t\cdot e^{at}\cdot\sin(\omega_0 t)$ 	$\frac{2\omega_0(p-a)}{\left[(p-a)^2+\omega_0{}^2\right]^2}$