

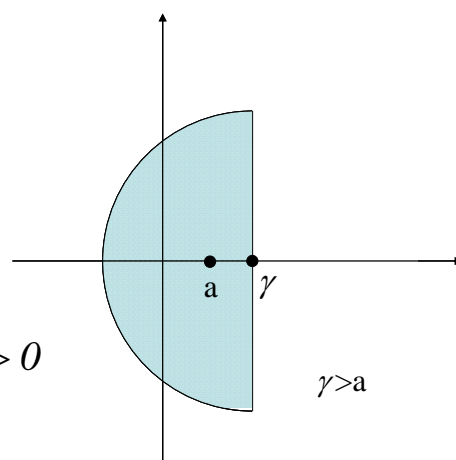
Inverse Laplace Transform

$$(1) e^{at} \rightarrow \frac{1}{s-a}$$

$$\text{Inverse Laplace transform : } \frac{1}{2\pi i} \int_{\gamma-i\infty}^{\gamma+i\infty} F(s)e^{st} ds$$

$$\frac{1}{2\pi i} \oint F(s)e^{st} ds = \frac{1}{2\pi i} \oint F(z)e^{zt} dz$$

$$= \frac{1}{2\pi i} (2\pi i) \lim_{z \rightarrow a} (z-a) \frac{1}{(z-a)} e^{zt} = e^{at}, t > 0$$



$$\frac{1}{2\pi i} \oint F(s)e^{st} ds = 0, t < 0$$

