

Helpful integrals

$$\int_0^{\infty} e^{-s^p} ds = p^{-1} \Gamma(p^{-1})$$

$$\int_0^{\infty} e^{iAs^p} ds = \frac{\Gamma(p^{-1})}{p|A|^{1/p}} \exp\left(\frac{i\pi}{2p} \operatorname{sgn}(A)\right)$$