

$$\psi_0(x) = \frac{e^{ivx}}{\sqrt{\sigma}} \exp\left(\frac{-x^2}{2\sigma^2}\right)$$

$$\psi(x, t) = \frac{e^{ivx}}{\sqrt{\sigma + it/\sigma}} \exp\left(\frac{-(x - vt)^2}{2\sigma^2(1 + it/\sigma)}\right)$$