\[ \psi(x) = \frac{E(\xi - \xi_0) - E(0)}{E(\xi) - E(0)} \]

\[ v(x) = \frac{E(\xi) - E(x)}{E(\xi) - E(0)} \]

\[ \frac{\partial}{\partial x} \psi(x) = \frac{i\hbar}{\alpha} \frac{\partial}{\partial x} \psi(x) \]

Verifying: \[ v(x) = \frac{E(\xi)}{E(x)} \]

Ode: \[ 0 = (x - \xi) v'(x) \]

\[ v(x) = 0 \]

(6) Eigen for the stationary density

\[ \psi_N(x) \]

Answer: \[ \psi(x) = e^{-\frac{x^2}{2\sigma^2}} \]

Hence \( C = 4 \).

For the stationary density,

\[ h_\pi \psi_N(h_\pi N(1+h_\pi) + \Psi = 0 \]

\[ h_\pi \psi_N(h_\pi + h_\pi N - h_\pi) = 0 \]

\[ \psi_N(h_\pi) + h_\pi N - h_\pi = 0 \]

\[ \pi = (x - \xi)^2 \phi(x) \]

\[ \psi_N \]

Solution to HW-10

622.020

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