Exercise 2.1-1 Free Electron Gas with Constant Boundary Conditions

Consider the free electron gas model but let the boundary conditions be: $\psi(0) = \psi(L) = 0$, i.e. we have fixed boundary conditions.

- Derive the solution to the Schrödingerequation and the density of states for this case.
- Show that the number of states is the same as for the periodic boundary conditions as given in the backbone

Link to the solution