額外練習習題

1. Consider an electron moving from left to right and is scattered by a step potential at . The step potential is: and .

A picture containing text, sky, map

Description automatically generated

A wave packet formulation of this scattering can be approximated by considering the stationary energy eigenfunction of this step potential. The solution is:

A picture containing diagram

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Calculate the probability density as a function of in terms of at It is a constant at .

解答：。

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Description automatically generated with medium confidence

A math equations and formulas

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A math equations and graphs

Description automatically generated with medium confidence