Physics 7502   Quantum Mechanics   Spring 2019

Assignment 9

Given: Fri April 12, 2019,   Due Fri April 19

Problem 1   Gasiorowicz 19.8

Problem 2   Work through and reproduce all equations in section 19-4.

Problem 3   Explain the idea of quantum teleportation by showing the process which will send a single quantum bit from Alice to Bob.

Problem 4   Explain how a quantum computer can compute some quantities with less operations than a classical computer by explaining how the Deutsch algorithm works.