

Physics 140 – Week of October 8

Reading

For 10/10 – R&P §5.1.

1. The no-cloning principle doesn't mean that all cloning is impossible. What are the limitations?
2. What did you find difficult or confusing about the reading? If nothing was particularly difficult, what was most interesting? Please be as specific as possible.

For 10/12 – R&P §5.2.

1. R&P introduce the C_{not} gate by showing how it can be used to entangle two unentangled qubits. Why (referring back to chapter 3) is entanglement going to be important for quantum computation?
2. What did you find difficult or confusing about the reading? If nothing was particularly difficult, what was most interesting? Please be as specific as possible.

For 10/15 – R&P §5.3.

1. Does quantum teleportation deserve its name?
2. What did you find difficult or confusing about the reading? If nothing was particularly difficult, what was most interesting? Please be as specific as possible.

Problems

R&P 5.2, 5.3, 5.10, 5.15, 5.17

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As a reminder, reading responses are due in my email inbox (ekb2@stmarys-ca.edu) at 9:00 p.m. the night before class. Problem sets are due Monday at 4:00 p.m., in the manila envelope outside my office.