Extra Credit #2 (Optional). Due Thurs 4/23.

1. In the protocol for quantum key distribution via non-orthogonal states, why is it that any attempt by a third party (Eve) to intercept the key can be detected?

2. What is quantum dense coding? How might it potentially violate the standard way of viewing a qubit (which claims a qubit only contains one classical bit's worth of information)? Why does it *not* violate this standard view?

3. What role do entangled states play in quantum teleportation?

4. In what sense can a qubit-based function calculator compute all possible values of a function in one step? Are all of these values immediately accessible? Why or why not?