Quantum Information B   Fall 2020   Problem Set 6

Solutions are due in 4 pm on Tuesday Dec 8.

This is the last problem set of the course. Phew!
All problems are taken from Nielsen-Chuang, look them up from the book.

1. Exercise 10.38 from the book. (Note: U=V up to a global phase)

2. VOLUNTARY (bonus credit): Exercise 10.42 from the book. Gottesman's paper (see Moodle) may help.

3. Exercise 10.47 from the book. Preskill notes page 41

4. Exercise 10.49 from the book.   theorem 10.8 page 466

5. Exercise 10.52 from the book.   QI Stack exch ta

6. Exercise 10.57 from the book. (Hint: use figures 10.11, 10.12 to construct the check matrices in non-standard form to get started)

7. Exercise 10.60 from the book.

Reading for this and next week: Read Chapter 10 to the end. (We will probably not get further in this course).