Quantum Information A   Fall 2020   Problem Set 6

Solutions are due in 4 pm on Tuesday Oct 13.

All problems are taken from Nielsen-Chuang, look them up from the book. This will probably be the hardest problem set so far. Try to do as many problems as you can.

1. Excercise 4.24 from the book.

2. Exercise 4.27 from the book. Hint: any permutation can be decomposed into a product of 2-cycles. Try to think how to implement the 2-cycle permutations first.

3. Excercise 4.31 from the book, show (4.32)-(4.34) only.

4. Excercise 4.32 from the book.

5. Excercise 4.37 from the book.

6. Excercise 4.39 from the book.