1. Exercise 2.3 from [KL].

2. Exercise 2.4 from [KL]. **Hint:** Use part (a) in part (c).

3. Exercise 2.13. from [KL]. **Clarification:** Prove that the *same* lower bound $|K| \geq |M|$ as in Theorem 2.7 holds also for almost perfectly secret encryption schemes. **Hint:** Ignore the hint in the book, but follow the original proof of Theorem 2.7 instead.

4. Exercises 2.7 and 2.8 from [KL]. You do *not* need to prove Exercise 2.6. You can just use the result.

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Figure 1: The “Red Phone” at the Jimmy Carter Library and Museum. Image credit: [www.wikipedia.org](http://www.wikipedia.org).