

This problem sheet is about NP-complete problems [1].

1. Explain what a decision problem is.
2. Explain what the NP complexity class is.
3. Explain the subset sum problem, and the brute-force approach to solving it.
4. Explain the SAT problem.
5. Explain the 3-SAT problem.
6. Explain how to prove that a problem is NP-complete.
7. Prove that 3-SAT is NP-complete. You may assume that SAT is NP-complete.

References

- [1] Michael Sipser. *Introduction to the Theory of Computation*. International Thomson Publishing, 3rd edition, 1996.