

# Tutorial 4 : Optimization problems

Computational complexity theory, 5th semester.

2022

## Exercise 1 — *PO and NPO*

Write the following problems as optimization problems. For each of them, determine if the problem belongs to PO or NPO.

1. (CHROMA)
2. (SIZE)
3. (INS)
4. (WINS)
5. (MATCHING)
6. (VERTEX COVER)
7. (SHP)
8. (LOP)
9. (TSP)
10. (MSPT)
11. (SET COVER)
12. (UST)
13. (DST)
14. (KNAPSACK)
15. (LP)
16. (ILP)
17. (FLOW)
18. (MIN SUDOKU)