Exercises on
SAT Solving
Problem set 4

Exercise 6: (Easy!) Construct a covering code of radius 2 for 5 variables.

Exercise 7:

- Which size does a covering code of radius 2 for 6 variables need to have at least, just considering cardinality?
- Try to construct a small as possible covering code of radius 2 for 6 variables.
- Show that your constructed code is minimal.

Practical Exercise 6: Implement a SAT solver based on a random walk: chose the initial assignment randomly, and then change it up to $3n$ times to satisfy a random clause not satisfied before.

Run your solver on random 3-SAT instances with 40 variables and 160 clauses. Count the total number of assignments tried before finding a satisfying solution, and the number of restarts (limited to 10).

Hand in on UniWorX until Tuesday, December 8, 2015, 4pm.