

MATH 350 ASSIGNMENT 2.

The “showoff problems” are starred. You are encouraged to come to my office and show me your solution. I will keep a record of people who are the first to solve any given starred problem.

Part I.. Problems from Rosen’s book.

- 4.4, #2 (p. 173)
- 6.1, #20, #28, #42* (p. 220–223)
- 7.2, #3 (p. 253), #26* (p. 254)
- 8.4, #1 (p. 315), #12 (p. 315). (Note: Compare #12 with #3.)

Part II.

1.* Let n be a natural number with m binary digits. (Suppose that n is given in binary form.)

- Give a polynomial time (in m) algorithm for computing $\lfloor \sqrt{n} \rfloor$, the largest integer a such that $a^2 \leq n$.
- Estimate the run time of your algorithm in terms of m .