

Analysis of Algorithms I: Problem Assignment 5

Due on Gradescope at 11:59pm on Monday, April 18, 2022.

Instructions

- Problems 1-5 are each worth 10 points.
- Submit your solutions in pdf format. Late submissions will **not** be accepted.
- You can discuss with TAs or other students but you must acknowledge them at the beginning of each problem and your solutions must be written in your own words.

Problems

1. Exercise 22.2-8 on Page 602: Diameter of a tree. (Aim for a linear-time algorithm.)
2. Exercise 22.3-5 (c), 22.3-8 and 22.3-11 on Page 612. (For 22.3-11, you only need to give an example to show that the situation described here is possible. In both 22.3-8 and 22.3-11, the examples are very simple directed graphs.)
3. Exercise 22.4-2 on Page 614.
4. Exercise 22.5-7 on Page 621.
5. Exercise 23.1-3 and 23.1-8 on Page 629.