

Analysis of Algorithms I: Problem Assignment 2

Due on Gradescope at 11:59pm on Monday, February 21, 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 5.4-6 (Page 142): Indicator random variables. (It is not part of the homework but if you like coin flipping, Exercise 5.1-3 is definitely worth trying.)
2. Problem 7-3 (b), (c), (d) and (e) (Page 187): Alternative quicksort analysis. (Again, it is not part of the homework but if you are interested in how we deal with equal element values, go through Problem 7-2.)
3. Exercise 8.1-1 on page 193 and Problem 8-4(b) on page 207.
4. Exercise 9.3-8 on page 223. (For convenience feel free to assume all integers are distinct.)
5. Problem 11-4 (a and b only) on page 284.