

CSE780 Homework 2
Due Friday, Oct. 10

1. Page 194: 9-3 (a,b,c) (2nd edition), 10-3 (1st edition)
2. Page 260: 12.2-7 (2nd edition), 250: 13.2-4 (1st edition)
3. Let $X[1..n]$ and $Y[1..n]$ be arrays, each containing n integers and each sorted in non-decreasing order. Write an algorithm that finds the median of the $2n$ combined elements. Analyze the worst-case running time. To receive full credit, your algorithm must run in $O(\log n)$ time.

(The grader will only grade a subset of these problems.)

A story found on homeworks in Algorithms: A terrible day happened at the Ohio State University when three students died. They were met at the gates of Heaven and were each asked how they had died to help determine if they deserved entrance. The first one said that she was taking a volleyball class when someone on the other team spiked the ball which then hit her head causing her skull to crack open. The reply from Heaven was “Volleyball? What are you doing having fun while millions are suffering? And your daddy was paying for it. You should have gotten a job. You are going straight to Hell”. The second one said he was out sunning himself and talking about his law class when a passing car went out of control and hit him. The reply from Heaven was “Law? Haha! You just wanted to make tons of money picking on the little people and tying up the court system. You’re going straight to Hell.” The third one said that he was working on his CSE780 homework in the computer science building and couldn’t take it anymore and had a heart attack. The reply from Heaven was “CSE780 homework? Enter my child, for you have already been through Hell.”