CS 180 Homework 4

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4.14 **Answer**:

4.18 **Answer**:

5.5 **Answer**:

5.6 **Answer**:

P5 Suppose you are given an array of sorted integers that has been circularly shifted k positions to the right. For example, taking $1, 3, 4, 5, 7$ and circularly shifting it 2 positions to the right you get $5, 7, 1, 3, 4$. Design an efficient algorithm for finding k.
Answer:

P6 Consider d sorted array of integers each containing $n_1, n_2, \ldots, n_d$ numbers. The numbers n_i are arbitrary. The total number of all elements is n (sum of all n_i) Design an $O(n \log d)$ algorithm that merges all arrays into one sorted list. You may wish to use a data structure that we have discussed in class.
Answer: