Algorithms
Computer Science 140 & Mathematics 168
Instructor: B. Thom
Spring 2004
Homework 4a
Due on 2/10/04 (in class)

1. [**15 Points**] **The Oil of Olay Problem!** Exercise 9.3-9 in CLRS (Page 193). Before beginning this problem, argue why placing the pipeline at the *mean* value of y is not always optimal (i.e. provide a counter example in which this will break). In "showing that this can be done in linear time" you should carefully argue *why* your algorithm provides an optimal answer.

2. [**10 Points**] **Proving Folklore is Correct!** In this problem, you are to use induction to prove that radix sort is correct. You may assume that counting sort is correct (you don't need to prove this) and that it is stable.