CS 410 Summer 2000
Clarifications for Homework 1

Question 4. min and max of functions are computed at each point. For example, in the expression $O(min(f(n), g(n)))$, for each n the value of $f(n)$ and the value of $g(n)$ is computed, and the lower of the two values is selected.

Question 8. There are two clarifications for this question:

(a) The constant c mentioned in the hint refers to the constant c in the definition of O, which presumedly you'll use to prove $T(n) = O(n)$.

(b) If you have no issues with the base case for this question, that's OK and you don't need to use this clarification. Some may be troubled by the fact that not all n will reduce down to precisely 1. If this bothers you, you may assume that $1 \leq T(n) \leq k$ for some fixed constant k for all n such that $1 \leq n < \max(1/a_1, 1/a_2)$. While this is a more precise way of handling this issue, the text misses this issue and there are no notes in the errata page, so apparently it is not considered something we need to worry about. Full credit will be granted whichever way this issue is handled.

Question 11. $T(1) = T(2) = 1$. Alternatively, you may use $T(0) = 0, T(1) = 1$. as is done in CLR.