

1. (1 pt.)

- This *quick check* is **closed book, notes, etc.**
- You may use a 3 in. \times 5 in. **reference card**, *hand-written by you*.
- Use the **classroom and textbook conventions** and terminology.

Read the above carefully; then write your name below:

2. (3 pts.) Briefly describe the two steps in solving recurrences using the *substitution method*:

3. (2 + 2 + 2 pts.) State (and briefly justify) the solution to the following recurrences.

(a) $T_1(n) = 2T_1(n/2) + 3n$

(b) $T_2(n) = 3T_2(n/3) + 2n$

(c) $T_3(n) = 3T_3(n/2) + 2n$