The following algorithm for sorting is called *slowsort*:

```
i ← 1
while i < n do
    if A[i] > A[i+1] then
        A[i] ↔ A[i+1]
i ← 1
    else
        i ← i + 1
end if
end while
```

**Problem 1.**

(a) What is the worst case input for comparisons for slowsort. (No justification needed.)

(b) Write a summation (actually nested summations) for how many comparisons slowsort uses in the worst case. Hint 1: The algorithm has a final pass to confirm that the list is sorted. Leave this pass out of your summation (but do not drop the term). Hint 2: Try some small examples (n=1,2,3,4 etc.).

(c) Simplify your summation.

(d) What is the high order term?

(e) Write the worst-case running time in order notation.

**Problem 2.**

(a) Write a summation (actually nested summations) for how many comparisons slowsort uses in the average case.

(b) Simplify your summation.

(c) What is the high order term?

(d) Write the average-case running time in order notation.