Mistake Checklist

1. Simplify All Expressions - BE CAREFUL
2. Check for algorithmic nuances.
3. Assume you are wrong and retrace from scratch.
4. Assume you made mistakes and don’t turn in the test until you are told to stop.

Specific Errors:

1. Big theta is exact!! Or within a constant! An upper and lower bound is not enough.
2. Rabin Karp starts with a “slow” compare. To find the next value take the difference between the dropped value and the new value.
3. Dynamic programming CAN increase efficiency, but it might NOT. Binary Search is an exception.
4. Telescoping: not always recursive. Take a large number of terms to a fixed number of terms.
5. Telescoping requires SUBRACTION, NOT ADDITION.
6. Be sure what “n” is when doing complexity problems. Use whatever “n” is in the directions, not whatever you think the “input” is.
7. Increasing by a factor of 2 for each level is 2^n. Deacreasing by a factor of 1 each time is upper bounded by n^2