

Runtime And Memory Cheatsheet

Runtime:

- Always calculate the runtime and ensure it is fast enough before implementing a problem
- 1) Calculate the big O runtime
ie) $O(N*M^2)$
 - 2) Plug in the values of the variables into the big O runtime:
ie) $N = 100, M = 1,000. N*M^2 = 100,000,000$
 - 3) Your code is fast enough if the number of operations is:
Java: $\leq 10^8$ operations
C++: $\leq 5*10^8$ operations

Memory:

- Only calculate the memory required if you think you are using too much memory
- 1) Put all your arrays in a code here: <https://codeforces.com/problemset/customtest> and click run to get the memory in KB.
 - 2) Convert the memory from KB to MB [here](#) (or by googling)
 - 3) If the memory is ≤ 256 MB (and the problem doesn't specify a different memory constraint than normal), the memory is within bounds.