

Maximize $\sum arr[i] * i$ of an Array

将数组排序，让大的数对应大的下标即可

```
#include <bits/stdc++.h>
#include <boost/multiprecision/cpp_int.hpp>
using namespace std;
using boost::multiprecision::cpp_int;

cpp_int maxSum(vector<int>& arr,int N) {
    cpp_int sum = 0;
    sort(arr.begin(), arr.end());
    for (int i = 0; i < N; ++i) {
        sum += i * arr[i];
    }
    return sum;
}

int main() {
    int T;
    scanf("%d", &T);
    while (T--) {
        int N;
        vector<int> arr;
        scanf("%d", &N);
        for (int i = 0; i < N; ++i) {
            int n;
            scanf("%d", &n);
            arr.push_back(n);
        }
        cout << maxSum(arr, N) % 1000000007 << endl;
    }
    return 0;
}
```