

# Problem C. SYPUCPC Problemsetting

**Time limit** 1000 ms  
**Mem limit** 262144 kB  
**OS** Windows

*It's no secret that coming up with a balanced problemset for the SYPUCPC is really hard so the problemsetters needs your help!!*

The current problemset has  $N$  problems, Problem with index  $i$  has difficulty of  $A_i$ .

We define the overall difficulty of the problemset by the average difficulty of all problems in that problemset, more formally the overall difficulty can be calculated as:  $\frac{\sum_{i=1}^M B_i}{M}$  where  $M$  is the number of problems in the problemset and  $B_i$  is the difficulty of the  $i_{th}$  problem.

Your task is to remove some (possibly none) problems from the given problemset to acheive the minimum possible overall difficulty.

**Note:** A problemset must at least have one problem, which means you can't just remove every single problem and call it a day.

## Input

The first line of input contains one integer  $T$  ( $1 \leq T \leq 10^5$ ) denoting the number of testcases.

The first line of each testcase contains one integer  $N$  ( $1 \leq N \leq 10^5$ )

The second line of each testcase contains  $N$  space-separated integers  $A_1, A_2, \dots, A_N$  ( $800 \leq A_i \leq 4000$ )

Its guaranteed that the sum of  $N$  over all testcases is less than or equal to  $10^5$ .

## Output

Print the minimum overall difficulty you can obtain after removing some problems

### Sample 1

Input	Output
2 2 4000 800 3 969 969 969	800 969