

Online (B)

Time: 25 minutes

Suppose you now own the Supplier company that you had always been ordering products from. Therefore, whenever you have to place a request for some product, it arrives immediately without any delivery lags. You have to compare if orders without delivery lags are invariably the better choices.

Input

The **first line** of the input file would contain one integer **T** denoting **the total number of trials** to simulate the system. The rest of the input file would be the same as offline.

Output

In the output file, you would show the Average (over T trials) Total Costs **with and without delivery lags** for all the given policies and show which choice is better in terms of the average cost. In the end, you need to show the **Optimal Policy(s)** for the respective standards based on which one(s) had the least average cost.

See the Sample I/Os for further clarification.