Problem F: Magic Matrix

Time Limit: 2 Sec Memory Limit: 256 MB
Submit: 172 Solved: 36
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Description

A matrix is magic , if the difference between its maxmium and mimimum elements ≤ m. IceRuler has a large N×N matrix M. He would like to know size of the biggest magic sub-matrix of M.

Input

Input contains multiple testcases. The first line of Input contains a single integer T（1≤T≤1000）.The number of testcases. For each case，first line contains two numbers N (1≤N≤500) and M(0≤M≤100000)，represent the given matrix is N square matrix and magic equilibrium value is M. Each of the next N rows contains N integers, representing the large matrix. Elements are positive integers and not larger than 10^5
. It is guaranteed that the sum of N^3
for all testcases is not exceed $2 \cdot 10^8$
。

Output

For each case, print size of the biggest magic sub-matrix of M in one line.

Sample Input

```
2
2 0
3 3
2 3
3 1
2 4 3
3 4 2
4 3 2
```

Sample Output

```
2
4
```

HINT

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