B. Apples in Boxes

time limit per test: 1 second
memory limit per test: 256 megabytes

Tom and Jerry found some apples in the basement. They decided to play a game to get some apples.

There are n boxes, and the i-th box has a_i apples inside. Tom and Jerry take turns picking up apples. Tom goes first. On their turn, they have to do the following:

- Choose a box i ($1 \le i \le n$) with a positive number of apples, i.e. $a_i > 0$, and pick 1 apple from this box. Note that this reduces a_i by 1.
- If no valid box exists, the current player loses.
- If **after the move**, $\max(a_1, a_2, \ldots, a_n) - \min(a_1, a_2, \ldots, a_n) > k$ holds, then the current player (who made the last move) also loses.

If both players play optimally, predict the winner of the game.

Input

Each test contains multiple test cases. The first line contains the number of test cases t ($1 \le t \le 10^4$). The description of the test cases follows.

The first line of each test case contains two integers n, k ($2 \le n \le 10^5, 1 \le k \le 10^9$).

The second line of each test case contains n integers $a_1, a_2, \ldots, a_n$ ($1 \le a_i \le 10^9$).

It is guaranteed that the sum of n over all test cases does not exceed 10^5.

Output

For each test case, print "Tom" (without quotes) if Tom will win, or "Jerry" (without quotes) otherwise.

Example

input Copy

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

output Copy

```
Tom
Tom
Jerry
```

Note

Note that neither player is necessarily playing an optimal strategy in the following games, just to give you an idea of how the game is going.

In the first test case of the example, one possible situation is shown as follows.

- Tom takes an apple from the first box. The array a becomes $[1, 1, 2]$. Tom does not lose because $\max(1, 1, 2) - \min(1, 1, 2) = 1 \le k$.
- Jerry takes an apple from the first box as well. The array a becomes $[0, 1, 2]$. Jerry loses because $\max(0, 1, 2) - \min(0, 1, 2) = 2 > k$.

→ Submit?

Language: GNU G++23 14.2 (64 bit, ms

Choose file: Choose File No file chosen

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

Submit

→ Last submissions

Submission	Time	Verdict
318511232	May/05/2025 19:02	Pretests passed
318510393	May/05/2025 19:00	Wrong answer on pretest 2
318509484	May/05/2025 18:57	Wrong answer on pretest 2
318474270	May/05/2025 17:56	Wrong answer on pretest 1
318472305	May/05/2025 17:54	Wrong answer on pretest 1

→ Score table

	Score
Problem A	163
Problem B	489
Problem C	978
Problem D	1304
Problem E	1793
Problem F1	1467
Problem F2	1630
Successful hack	100
Unsuccessful hack	-50
Unsuccessful submission	-50
Resubmission	-50

* If you solve problem on 01:27 from the first attempt

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