

1579 - Bakugan

Description

Mark and Leti love to play with Bakugan balls. These balls are small plastic spheres with a tiny monster toy inside. When dropped to the ground, a Bakugan ball pops open with an incredible sound, liberating a fearsome Bakugan monster. Mark and Leti love to play with the toy monsters, but popping open the balls is also great fun.

Each of them received a bag with Bakugan balls, and they invented a game to pop open the balls. There are 10 different monsters, and for the game Mark and Leti associated each monster with a different integer from 1 to 10, according to the monster's ugliness. The game is composed of R rounds. At each round:

- both players drop simultaneously a ball each;
- each player accumulates a number of points coincident with the number associated with the monster liberated by her/his ball;
- the first (and only the first) player who liberates the same monster in three consecutive rounds earns 30 additional points; if this condition happens in the same round for both players then nobody earns extra points.

The winner of the game is the player who accumulates more points. Please help Mark and Leti announce the winner of the game!

Input specification

Each test case is described using three lines. The 1st line contains an integer R representing the number of rounds of the game ($1 \leq R \leq 10$). The second line contains R integers M_i indicating the monsters liberated by Mark at each turn ($1 \leq M_i \leq 10$ for $1 \leq i \leq R$). The third line contains R integers L_i indicating the monsters liberated by Leti at each turn ($1 \leq L_i \leq 10$ for $1 \leq i \leq R$). The last test case is followed by a line containing one zero.

Output specification

For each test case output a line with a character representing the result of the game: 'M' (uppercase) if the winner is Mark, 'L' (uppercase) if the winner is Leti, or 'T' (uppercase) if there is a tie.

Sample input

```
10
4 2 2 2 5 6 7 8 1 1
1 4 4 4 1 1 1 1 2 3
5
3 3 3 3 2
8 9 9 9 9
10
8 4 7 1 1 9 5 2 4 3
5 6 9 7 9 4 2 3 7 4
0
```

Sample output

```
M
T
L
```

Hint(s)

Source	Caribbean Finals 2011 - Practice
Added by	juanky
Addition date	2011-11-04
Time limit (ms)	1000
Test limit (ms)	1000
Memory limit (kb)	30000
Output limit (mb)	64
Size limit (bytes)	10000
Enabled languages	C C# C++ Java Pascal Perl PHP Python Ruby Text