DMOPC '15 Contest 4 P3 - Lethal

Time limit: 0.6s   **Memory limit:** 64M

WallE256 and ionutpop118 are playing G games of Hearthstone! Hearthstone is a card game in which two players duke it out with minions, spells, and secrets. To keep their game simple, they've decided to use minions only and play according to the following rules:

- Each player starts the game with 30 health
- Each player can have no more than 7 minions on the board
- Each minion has two stats - its attack and health
- Each minion can only attack once per turn, if it attacks another minion, both lose health equivalent to the other's attack, if it attacks the opponent directly, the opposing player loses health equivalent to the minion's attack
- A minion dies if its health reaches 0 or below, similarly, a player wins if the opponent's health reaches 0 or below
- Opponent minions with the special effect *taunt* **must** be killed first before attacking the opponent player

A player is considered to *have lethal* if they can win the game in that turn.

Unfortunately, ionutpop118 has terrible rng luck. He always seems to end up in a terrible situation — with low health and only one *taunt* minion on the board. It is now **WallE256**'s turn, and he wonders: does he have lethal?

Input Specification

The first line of input will contain G, the number of games they play. $(1 \leq G \leq 5)$

The second line of each game will contain N $(0 \leq N \leq 7)$, the number of minions **WallE256** has on the board.

The third line of each game will contain N space-separated integers, the attack values of **WallE256**'s minions. Attack values will be no greater than 12.

The fourth line of each game will contain two space-separated integers, H_i $(1 \leq H_i \leq 30)$ and H_m $(1 \leq H_m \leq 12)$, ionutpop118's health and his *taunt* minion's health, respectively.

Output Specification

For each game, output `LETHAL` or `NOT LETHAL` on a separate line.

Sample Input

```
2
3
3 5 3
4 5
2
5 3
7 4
```

Sample Output

```
LETHAL
NOT LETHAL
```

Explanations and Illustrations for Sample Output

In the first game, **WallE256** can use the 5-attack minion to kill the taunt minion (distinguished by its shield border), then use the 2 3-attack minions to finish ionutpop118 off.

In the second game, there is simply not enough damage for lethal.