

Problem C. Shampoo

Time limit 2000 ms

Mem limit 1048576 kB

Problem Statement

Three people live in Takahashi's house: Takahashi, his father, and his mother. All of them wash their hair in the bathroom each night.

His father, his mother, and Takahashi take a bath in this order and use A , B , and C milliliters of shampoo, respectively.

This morning, the bottle contained V milliliters of shampoo. Without refilling, who will be the first to run short of shampoo to wash their hair?

Constraints

- $1 \leq V, A, B, C \leq 10^5$
- All values in input are integers.

Input

Input is given from Standard Input in the following format:

```
V A B C
```

Output

If the first person to run short of shampoo to wash their hair is Takahashi's father, print **F**; if it is Takahashi's mother, print **M**; if it is Takahashi, print **T**.

Sample 1

Input	Output
25 10 11 12	T

Now, they have 25 milliliters of shampoo.

- First, Takahashi's father uses 10 milliliters, leaving 15.
- Next, Takahashi's mother uses 11 milliliters, leaving 4.
- Finally, Takahashi tries to use 12 milliliters and runs short of shampoo since only 4 is remaining.

Sample 2

Input	Output
30 10 10 10	F

Now, they have 30 milliliters of shampoo.

- First, Takahashi's father uses 10 milliliters, leaving 20.
- Next, Takahashi's mother uses 10 milliliters, leaving 10.
- Then, Takahashi uses 10 milliliters, leaving 0.
- Next day, Takahashi's father tries to use 10 milliliters and runs short of shampoo since only 0 is remaining.

Sample 3

Input	Output
100000 1 1 1	M