

Problem A. Stair, Peak, or Neither?

Time limit 1000 ms
Mem limit 262144 kB

You are given three digits a , b , and c . Determine whether they form a stair, a peak, or neither.

- A *stair* satisfies the condition $a < b < c$.
- A *peak* satisfies the condition $a < b > c$.

Input

The first line contains a single integer t ($1 \leq t \leq 1000$) — the number of test cases.

The only line of each test case contains three digits a, b, c ($0 \leq a, b, c \leq 9$).

Output

For each test case, output "STAIR" if the digits form a stair, "PEAK" if the digits form a peak, and "NONE" otherwise (output the strings without quotes).

Examples

Input	Output
7	STAIR
1 2 3	NONE
3 2 1	PEAK
1 5 3	PEAK
3 4 1	NONE
0 0 0	NONE
4 1 7	STAIR
4 5 7	