Problem K. div4-1

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 ($1 \le t \le 1000$) — the number of test cases.

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

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