E. XOR Guessing

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

This is an interactive problem. Remember to flush your output while communicating with the testing program. You may use `fflush(stdout)` in C++, `system.out.flush()` in Java, `stdout.flush()` in Python or `flush(output)` in Pascal to flush the output. If you use some other programming language, consult its documentation. You may also refer to the guide on interactive problems: https://codeforces.com/blog/entry/45307.

The jury picked an integer x not less than 0 and not greater than $2^{14} - 1$. You have to guess this integer.

To do so, you may ask no more than 2 queries. Each query should consist of 100 integer numbers $a_1, a_2, ..., a_{100}$ (each integer should be not less than 0 and not greater than $2^{14} - 1$). In response to your query, the jury will pick one integer i ($1 \le i \le 100$) and tell you the value of $a_i \oplus x$ (the bitwise XOR of a_i and x). There is an additional constraint on the queries: all 200 integers you use in the queries should be distinct.

It is guaranteed that the value of x is fixed beforehand in each test, but the choice of i in every query may depend on the integers you send.

Output

To give the answer, your program should print one line $! \ x$ *with a line break in the end*. After that, it should flush the output and terminate gracefully.

Interaction

Before giving the answer, you may submit no more than 2 queries. To ask a query, print one line in the following format: $? \ a_1 \ a_2 \ ... \ a_{100}$, where every a_j should be an integer from the range $[0, 2^{14} - 1]$. *The line should be ended with a line break character*. After submitting a query, flush the output and read the answer to your query — the value of $a_i \oplus x$ for some $i \in [1, 100]$. **No integer can be used in queries more than once.**

If you submit an incorrect query (or ask more than 2 queries), the answer to it will be one integer -1. After receiving such an answer, your program should terminate immediately — otherwise you may receive verdict "Runtime error", "Time limit exceeded" or some other verdict instead of "Wrong answer".

Example

input	Copy
0
32	

output	Copy
? 3 5 6
? 32 24 37
! 5	

Note

The example of interaction **is not correct** — you should sumbit **exactly** 100 integers in each query. Everything else is correct.

Hacks are forbidden in this problem.

ITMO UNIVERSITY