

E. The penguin's game

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

Pay attention: this problem is interactive.

Penguin Xoriy came up with a new game recently. He has n icicles numbered from 1 to n . Each icicle has a temperature — an integer from 1 to 10^9 . **Exactly two** of these icicles are special: their temperature is y , while a temperature of all the others is $x \neq y$. You have to find those special icicles. You can choose a *non-empty* subset of icicles and ask the penguin what is the bitwise exclusive OR (XOR) of the temperatures of the icicles in this subset. Note that you can't ask more than **19** questions.

You are to find the special icicles.

Input

The first line contains three integers n, x, y ($2 \leq n \leq 1000, 1 \leq x, y \leq 10^9, x \neq y$) — the number of icicles, the temperature of non-special icicles and the temperature of the special icicles.

Output

To give your answer to the penguin you have to print character `!` (without quotes), then print two integers p_1, p_2 ($p_1 < p_2$) — the indexes of the special icicles **in ascending order**. Note that `!` and p_1 should be separated by a space; the indexes should be separated by a space too. After you gave the answer your program should terminate immediately.

Interaction

To ask a question print character `?` (without quotes), an integer c ($1 \leq c \leq n$), and c distinct integers p_1, p_2, \dots, p_c ($1 \leq p_i \leq n$) — the indexes of icicles that you want to know about. Note that `?` and c should be separated by a space; the indexes should be separated by a space too.

After you asked the question, read a single integer — the answer.

Note that you can't ask more than **19** questions. If you ask more than 19 questions or at least one incorrect question, your solution will get `Wrong answer`.

If at some moment your program reads `-1` as an answer, it should immediately exit (for example, by calling `exit(0)`). You will get `Wrong answer` in this case, it means that you asked more than 19 questions, or asked an invalid question. If you ignore this, you can get other verdicts since your program will continue to read from a closed stream.

Your solution will get `Idleness Limit Exceeded`, if you don't print anything or forget to flush the output, including for the final answer .

To flush you can use (just after printing):

- `fflush(stdout)` in C++;
- `System.out.flush()` in Java;
- `stdout.flush()` in Python;
- `flush(output)` in Pascal;
- For other languages see the documentation.

Hacking

For hacking use the following format:

$n\ x\ y\ p_1\ p_2$

Here $1 \leq p_1 < p_2 \leq n$ are the indexes of the special icicles.

Contestant programs will not be able to see this input.

Example

input	Copy
4 2 1 2 1 1	
output	Copy

Codeforces Round #427 (Div. 2)

Finished

→ Practice?

Want to solve the contest problems after the official contest ends? Just register for practice and you will be able to submit solutions.

Register for practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Problem tags

binary search constructive algorithms

interactive *2400

No tag edit access

→ Contest materials

- Announcement #1 (en) ×
- Announcement #2 (ru) ×
- Tutorial #1 (ru) ×
- Tutorial #2 (en) ×

```
? 3 1 2 3
? 1 1
? 1 3
! 1 3
```

Note

The answer for the first question is $1 \oplus 2 \oplus 1 = 2$.

The answer for the second and the third questions is 1, therefore, special icicles are indexes 1 and 3.

You can read more about bitwise XOR operation here: https://en.wikipedia.org/wiki/Bitwise_operation#XOR.

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