

Guess the Sequence

Time limit: 2.0s **Memory limit:** 64M

There is a sequence of numbers of length N ($1 \leq N \leq 15$), with each number being either 1, 2, or 3. Can you guess this sequence?

Interaction

This is an interactive problem. You should keep outputting numbers between 1 and 3, inclusive and reading a line of input after each output. The line will be `NO` if your guess for the current position is incorrect or `YES` if you guessed the current position correctly. If you guessed the whole sequence correctly, you will receive a single line `DONE`, and you should terminate your program then.

After each time you output a number, you might need to flush the output. In Python, you can do this with `sys.stdout.flush()` (after you `import sys`).

Sample Interaction

`>>>` denotes your output: don't actually print this out.

```
>>> 1
YES
>>> 3
NO
>>> 2
YES
>>> 1
NO
>>> 2
NO
>>> 3
YES
DONE
```

Explanation

The sequence is 1, 2, 3.

Note

There is only one input file, and the length of the sequence N is exactly 15. Your score will decrease with more wrong guesses, so guess as wisely as you can given that you have no information whatsoever about the secret sequence (or... do you?).