

## Number Guessing

Elly thought of an integer between 1 and 1000, inclusive. You want to guess it by making several queries. For each query the girl will tell you whether the number you said is what she thought of, and if it is not – whether your number is smaller or larger than hers.

The girl gave you an ultimatum. If you cannot guess her number in ten or less queries, she will stop talking to you, because you apparently are not worth her time. (For the sake of this task you will only receive Wrong Answer.)

### Interaction

The task is interactive – you will print your guesses and receive answers for each of them. Each query is a single integer in the interval [1, 1000], printed on a separate line of the standard output. For each query you will receive the answer on the standard input:

- ❖ "Correct!", if you guessed Elly's number correctly.
- ❖ "Larger.", if your guess is larger than the number Elly has thought of.
- ❖ "Smaller.", if your guess is smaller than the number Elly has thought of.

In order to avoid hanging of the program due to buffering of the output, after each query please also flush the standard output:

- ❖ C: `fflush(stdout)`
- ❖ C++: `cout << flush;`
- ❖ Java: `System.out.flush()`
- ❖ Python: `stdout.flush()`

Sample Input	Sample Output
Smaller.	13
Smaller.	17
Larger.	666
Correct!	42

*First you guessed 13, on which Elly replied that this number is smaller than hers. Your next guess was 17, which is also smaller. Your third guess is 666, on which Elly replies that it is larger than hers. You decide to try The Answer to Life, The Universe, And Everything Else: 42, which turns out to be exactly the number Elly thought of.*