Guess the number

Time limit:	1 second
Memory limit:	256 megabytes

TV Show «Guess the number!» is becoming popular. The rules of the game are simple. The host of the show picks an integer number and the participants try to guess that number.

You were invited to participate in the show. First, the host announced the number N and then picked an integer number between 1 and N. Now you can ask questions $ask(x)$ where x is a positive integer number. The host will answer your questions with one of the three symbols:

- "$>$" if x is strictly greater than the hidden number
- "$<$" if x is strictly less than the hidden number
- "$=$" if x is equal to the hidden number

If the participant gets «=» as an answer to their question, the game is terminated and they are announced to be the winner.

Your task is to find a winning strategy.

Interaction Protocol

Your task is to implement the following function:

```
int guess_number(int N)
```

- N: a maximum possible positive integer number that can be picked by the broadcaster.
- The function is called exactly one time for each test.
- The function has to return the hidden number.

Your function can call the following function:

```
char ask(int x)
```

- x: the number asked by the participant.
- $1 \leq x \leq N$
- You can call the function no more that 5000 times.
- The function returns one of the symbols described above in the statements.

If any of the above conditions are violated, your program will get **Wrong Answer** verdict. Otherwise, your program will get **Accepted** verdict and your score is calculated based on the number of calls of the function `ask`. Refer to the section 'Scoring'.

Scoring

Constraints:

- $1 \leq N \leq 1000$

In this task, checker IS NOT adaptive. It means that N is fixed during the execution time of the checker and does not depend on queries from your program.

Subtasks:

1. (5 points) $N = 5$. Let the number q to be the number of calls of the function `ask`.
   - $q \leq 3$, your score is 5.
   - Otherwise, your score is 0.
2. (95 points) No additionals constraints. For this subtask, your score is calculated in the following manner. Let the number q to be the number of calls of the function `ask`.
   - $q \leq 10$, your score is 95.
   - $10 < q \leq 50$, your score is $95 - 2(q - 10)$.
   - Otherwise, your score is 0.

Note that your score for each subtask is the minimum score among all the results on tests of the corresponding subtask.