April Fools Day Contest

A. Mysterious numbers - 1

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Input
The input contains two integers a_1, a_2 $(0 \le a_i \le 10^9)$, separated by a single space.

Output
Output a single integer.

Sample test(s)

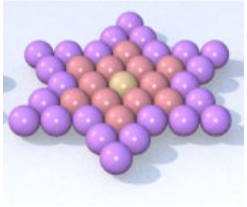
input
3 14
output
44

input
27 12
output
48

input
100 200
output
102

B. Star

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output



Input
The input contains a single integer a ($1 \le a \le 18257$).

Output
Print a single integer $output$ ($1 \le output \le 2 \cdot 10^9$).

Sample test(s)

input
2
output
13

C. A Piece of Cake

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

How to make a cake you'll never eat.

Ingredients.

- 2 carrots
- 0 calories
- 100 g chocolate spread
- 1 pack of flour
- 1 egg

Method.

1. Put calories into the mixing bowl.
2. Take carrots from refrigerator.
3. Chop carrots.
4. Take chocolate spread from refrigerator.
5. Put chocolate spread into the mixing bowl.
6. Combine pack of flour into the mixing bowl.
7. Fold chocolate spread into the mixing bowl.
8. Add chocolate spread into the mixing bowl.
9. Put pack of flour into the mixing bowl.
10. Add egg into the mixing bowl.
11. Fold pack of flour into the mixing bowl.
12. Chop carrots until choped.
13. Pour contents of the mixing bowl into the baking dish.

Serves 1.

Input

The only line of input contains a sequence of integers $a_0, a_1, \ldots$ ($1 \le a_0 \le 100$, $0 \le a_i \le 1000$ for $i \ge 1$).

Output

Output a single integer.

Sample test(s)

input
4 1 2 3 4
output
30

D. Broken checker

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

"This problem is rubbish! There is not statement, and there are only 5 test cases. The problemsetter took liberties with this problem!" — people complained in the comments to one round on Codeforces. And even more... No, wait, the checker for the problem was alright, that's a mercy.

Input

The only line of the input contains an integer between 1 and 5, inclusive. All tests for this problem are different. The contents of the test case doesn't need to be equal to its index.

Output

The only line of the output contains an integer between 1 and 3, inclusive.

Sample test(s)

Note

This problem has no samples, since there so few test cases.

E. MYSTERIOUS LANGUAGE

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given a mysterious language (codenamed "Secret") available in "Custom Test" tab. Find out what this language is and write a program which outputs its name. Note that the program must be written in this language.

Input

This program has only one test, and it's empty (it doesn't give your program anything to read).

Output

Output the name of the mysterious language.

Sample test(s)

F. ucyhf

time limit per test: 2 seconds
memory limit per test: 64 megabytes
input: standard input
output: standard output

qd ucyhf yi q fhycu dkcruh mxeiu huluhiu yi q tyvvuhudj fhycu dkcruh. oekh jqia yi je vydt jxu djx ucyhf.

Input

jxu ydfkj sediyiji ev q iydwbu ydjuwuh d $(1 \le d \le 11184)$ — jxu edu-rqiut ydtun ev jxu ucyhf je vydt.

Output

ekjfkj q iydwbu dkcruh.

Sample test(s)

input
1
output
13

G. Mysterious numbers - 2

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Input

The only line of input contains three integers a_1, a_2, a_3 ($1 \le a_1, a_2, a_3 \le 20$), separated by spaces.

Output

Output a single integer.

Sample test(s)

input
2 3 2
output
5

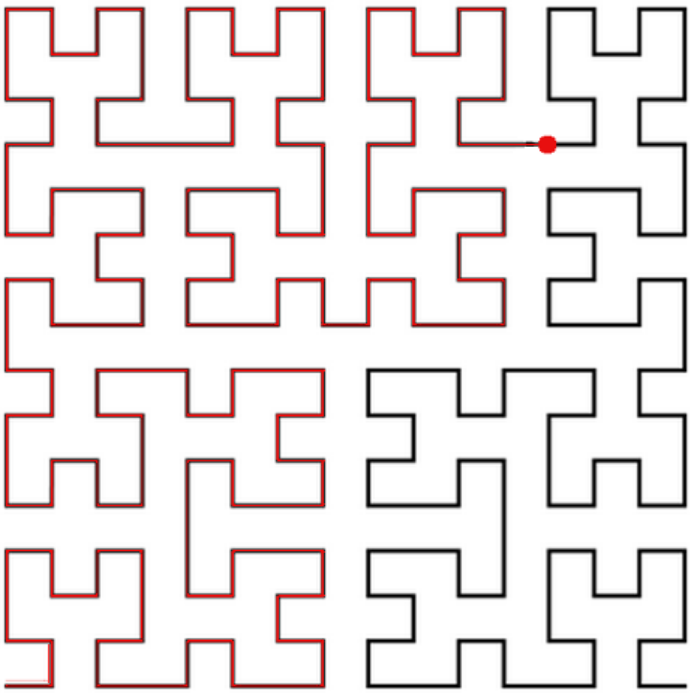
input
13 14 1
output
14

input
14 5 9
output
464

input
17 18 3
output
53

H. A polyline

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output



Input

The input contains two integers a, b ($1 \le a \le 10$, $0 \le b \le 2^{2 \cdot a} - 1$) separated by a single space.

Output

Output two integers separated by a single space.

Sample test(s)

input
1 0
output
0 0

input
2 15
output
3 0

input
4 160
output
12 12