G. Mysterious numbers - 2

Input

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

Output

Output a single integer.

Examples

input
2 3 2

output
5

input
13 14 1

output
14

input
14 5 9

output
464

input
17 18 3

output
53