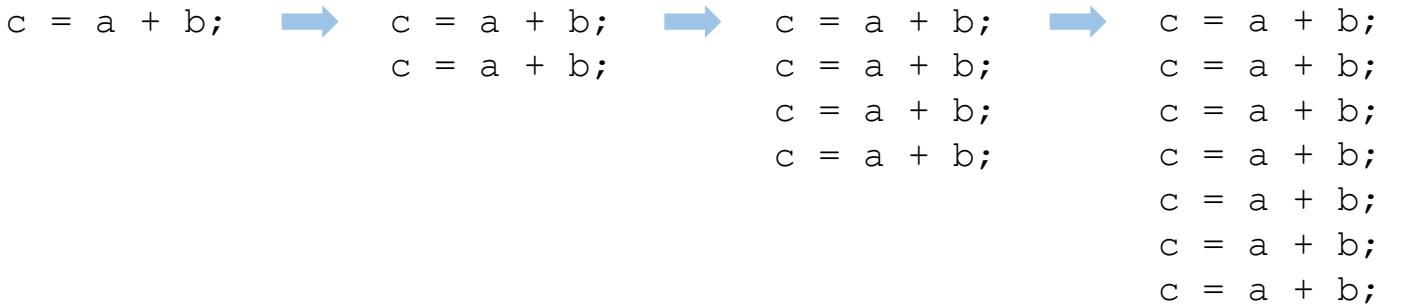


Copy-and-paste is a simple and time-saving approach for typing similar codes. For instance, we can type `c = a + b;` seven times by three copy-and-pastes:



Your goal is to write a program to calculate the number of copy-and-paste required for obtaining n copies from the original statements.

Input

The input includes several lines ended with -1. Each line contains a number.

Output

For each case, output the number of copy-and-paste required as mentioned above. Each output should be in separate line.

Sample Input

3
9
-1

Sample Output

2
4