

# Project Euler #104: Pandigital Fibonacci ends

This problem is a programming version of [Problem 104](#) from [projecteuler.net](#)

The Generalized Fibonacci sequence is defined by the recurrence relation:

$$G_n = G_{n-1} + G_{n-2}, \text{ where } G_1 = a \text{ and } G_2 = b.$$

It turns out that  $F_{541}$ , which contains 113 digits, is the first Fibonacci number for which the last nine digits are 1-9 pandigital (contain all the digits 1 to 9, but not necessarily in order). And  $F_{2749}$ , which contains 575 digits, is the first Fibonacci number for which the first nine digits are 1-9 pandigital.

Given that  $G_n$  is the first Generalized Fibonacci number for which the first  $k$  digits AND the last  $k$  digits are 1- $k$  pandigital, find  $n$ .

**NOTE** For this problem if you don't find a solution with in  $n \leq 2 \times 10^6$ , print **no solution**.

### Input Format

First line of input contains  $a$ , second line contains  $b$  and the third line contains  $k$ .

### Constraints

$$1 \leq a \leq b \leq 9$$
$$1 \leq k \leq 9$$

### Output Format

Print the value  $n$  where  $G_n$  is the required generalized fibonacci term.

### Sample Input#00

```
1
1
1
```

### Sample Output#00

```
1
```

### Sample Input#01

```
1
1
2
```

### Sample Output#01

```
8
```