Project Euler #104: Pandigital Fibonacci ends

The Generalized Fibonacci sequence is defined by the recurrence relation:

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

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 $n \le 2 \times 10^6$, print no solution .

Input Format

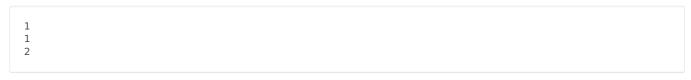First line of input contains a, second line contains b and the third line contains k.

Constraints

$1 \le a \le b \le 9$
$1 \le k \le 9$

Output Format

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

Sample Input

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1
1
2
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Sample Output

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8
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