Pub Encounter (pickup)

Yesterday, Edoardo spent an amazing night at a bar. After a handful of drinks his charm was unleashed, and girls all around him were fighting for him (to the best of his memories of the night). One girl even wrote her number on his arm, for him to call her back!

Figure 1: Edoardo getting the phone number written on his arm.

Unfortunately, after waking up the next day, Edoardo realised to his dismay that the number was all smeared around and intelligible. He only remembers few things he noticed about the number:

- that it did not contain any zero as a digit,
- that the number was a multiple of A,
- that the sum of its digits was B,

Now there is only one sensible option left: enumerate all such numbers and try to call all of them in order. Help Edoardo track the girl, by computing the K-th number satisfying the constraints above!

☞ Among the attachments of this task you may find a template file `pickup.*` with a sample incomplete implementation.

Input

The first line contains the three integer A, B and K.

Output

You need to write a single line with an integer: the K-th multiple of A without zero digits and with sum of digits B.

Constraints

- $1 \leq A, B \leq 300$.
- $1 \leq K \leq 10^{18}$.
- There are at least K numbers as described above.

Scoring

Your program will be tested against several test cases grouped in subtasks. In order to obtain the score of a subtask, your program needs to correctly solve all of its test cases.

– **Subtask 1** (0 points) Examples.

– **Subtask 2** (20 points) $A = 1, K = 1$.

– **Subtask 3** (20 points) The answer is less than 10^6.

– **Subtask 4** (20 points) $A = 1$.

– **Subtask 5** (20 points) $B \leq 20$.

– **Subtask 6** (20 points) No additional limitations.

Examples

input	output
3 9 11	126
17 6 3	3111

Explanation

In the **first sample case**, the first numbers multiple of 3 with sum of digits 9 are:

9 18 27 36 45 54 63 72 81 117 126

Thus, the 11th number is 126.

Note that 90 and 108 are not valid as they contain the digit '0'.

In the **second sample case**, the only numbers multiple of 17 with sum of digits 6 are 51, 1122, 3111.