Coding Arena

Problem

In NASA, two researchers, Mathew and John, started their work on a new planet, but while practicing research they faced a mathematical difficulty. In order to save the time they divided their work.

So scientist Mathew worked on a piece and invented a number computed with the following formula:

T(n) = n(n+1)/2
These numbers are called Mathew numbers.

And scientist John invented another number which is built by adding the squares of its digits. Doing this perpetually, the numbers will end in 1 or 4. If a positive integer ends with 1, then it is called John number.
Example of John numbers is:

13 = 1^2 + 3^2 = 1+9 = 10 (Step : 1).
10 = 1^2 + 0^2 = 1+0 = 1 (Step : 2), iteration ends in Step 2 since number ends with 1.
Help Mathew and John combine their research work by finding out number in a given range that satisfies both properties.

Input Format:

Input consists of 3 integers X, Y, N, one on each line. X and Y are upper and lower limits of the range. The range is inclusive of both X and Y. Find Nth number in range [X,Y] which is actually a Mathew-John

Line 1	X,where X is the upper limit of the range
Line 2	Y,where Y is the lower limit of the range
Line 3	N,where Nth element of the series is required

Output Format:

Output will show the Nth element of the Mathew-John series lying in the range between X and Y.

Line 1	**For Valid Input,print** U,where U is the Nth element of the Mathew-John series lying in the range between X and Y **Or** No number is present at this index **For Invalid Input,print** Invalid Input

Sample Test Cases:

SNo.	Input	Output
1	1 15 2	10
2	9 45 3	No number is present at this index
3	-5 @ 4	Invalid Input

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Submit Answer

☐ I BHARGAVA GANTI confirm that the answer submitted is my own.

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