

Cheating



SEASON 9 – SIXTH ROUND

Alex has a test in a standard online classroom with N students, numbered from 1 to N . Naturally, everyone already has the right answers and the only thing left to do is submit them. In order to make it less suspicious, the students have devised the following plan:

- They choose a number K
- Student number 1 turns in their test first
- Every minute the student with a number K bigger than the previous submits their test. If the new number is bigger than N , subtract N from it.
- When someone's number comes a second time, everyone stops. It is possible that some students do not get the chance to turn in their tests.

Alex does not want to sit and wait for his turn to come. He asks you to write a program that tells him on which minute he should submit his test. If his turn never comes, print "Impossible" (without the quotation marks).

Input

The first line of the input file `cheating.in` contains the numbers N , K and L - respectively the number of students, the chosen K and Alex's number.

Output

In the output file `cheating.out` print how many minutes after the first submitted test Alex has to submit his. If his turn never comes print "Impossible".

Constraints

$$1 \leq K, L \leq N \leq 1\,000\,000\,000$$

Time limit: 0.2 seconds

Memory limit: 256 MB

Examples

Input (<code>cheating.in</code>)	Output (<code>cheating.out</code>)	Explanation
4 3 2	3	The turn in order is 1, 4, 3, 2
15 6 3	Impossible	The turn in order is 1, 7, 13, 4, 10. After that should be number 1, but because he already has turned in his test, everyone stops.