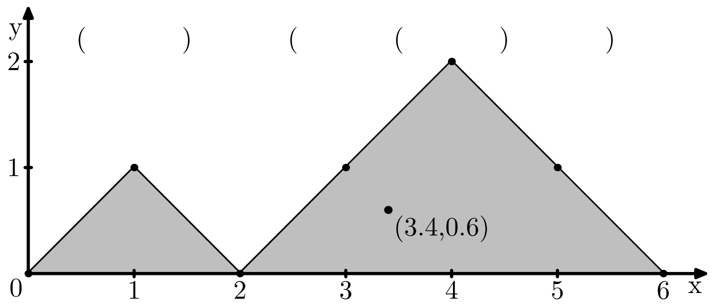
Problem E. Equilibrium Point /\/\

Time limit: 3 seconds
Memory limit: 512 megabytes

Consider a balanced bracket sequence s with one type of brackets: '(' and ')'.

There is a common geometrical representation of such a sequence. Starting at the point $(0, 0)$, you draw a polyline, for each bracket moving along a vector $(1, 1)$ if it is an opening bracket, and along $(1, -1)$ if it is a closing bracket.



Consider an area between this curve and the line $y = 0$. It is a set of polygons. This area has its center of mass at some point (x, y). Note that the center of mass might be outside of the area.

You are to solve the reverse problem. Given the length n and a point (x, y), find any balanced bracket sequence of length n such that the center of mass of its geometrical representation is located at (x, y).

Input

The first line contains three numbers n, x, and y (n is an even integer, $2 \le n \le 36$; $0 < x, y < n$) — the length of the desired sequence and the coordinates of the desired center of mass.

It is guaranteed that (x, y) is the center of mass of some balanced bracket sequence of length n, with Euclidean-distance error of no more than 10^{-9}.

Output

Output a balanced bracket sequence with brackets '(' and ')' of length n such that the center of mass of its geometrical representation is located at the point (x, y), with Euclidean-distance error of no more than 10^{-7}.

Example

standard input	standard output
6 3.4 0.6	()(())