

C. The Football Season

time limit per test: 1 second
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output

The football season has just ended in Berland. According to the rules of Berland football, each match is played between two teams. The result of each match is either a draw, or a victory of one of the playing teams. If a team wins the match, it gets w points, and the opposing team gets 0 points. If the game results in a draw, both teams get d points.

The manager of the Berland capital team wants to summarize the results of the season, but, unfortunately, all information about the results of each match is lost. The manager only knows that the team has played n games and got p points for them.

You have to determine three integers x , y and z — the number of wins, draws and losses of the team. If there are multiple answers, print any of them. If there is no suitable triple (x, y, z) , report about it.

Input

The first line contains four integers n , p , w and d ($1 \leq n \leq 10^{12}$, $0 \leq p \leq 10^{17}$, $1 \leq d < w \leq 10^5$) — the number of games, the number of points the team got, the number of points awarded for winning a match, and the number of points awarded for a draw, respectively. Note that $w > d$, so the number of points awarded for winning is strictly greater than the number of points awarded for draw.

Output

If there is no answer, print -1 .

Otherwise print three non-negative integers x , y and z — the number of wins, draws and losses of the team. If there are multiple possible triples (x, y, z) , print any of them. The numbers should meet the following conditions:

- $x \cdot w + y \cdot d = p$,
- $x + y + z = n$.

Examples

input	Copy
30 60 3 1	
output	Copy
17 9 4	
input	Copy
10 51 5 4	
output	Copy
-1	
input	Copy
20 0 15 5	
output	Copy
0 0 20	

Note

One of the possible answers in the first example — 17 wins, 9 draws and 4 losses. Then the team got $17 \cdot 3 + 9 \cdot 1 = 60$ points in $17 + 9 + 4 = 30$ games.

In the second example the maximum possible score is $10 \cdot 5 = 50$. Since $p = 51$, there is no answer.

Codeforces Round #592 (Div. 2)

Finished

Practice



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→ Submit?

Language: GNU G++11 5.1.0

Choose file: [选择文件](#) 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

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→ Problem tags

brute force math number theory
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No tag edit access

→ Contest materials

- Announcement #1 (en) 

In the third example the team got 0 points, so all 20 games were lost.

• Announcement #2 (ru)

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