

UHCC1 P1 - PONG!

Time limit: 1.0s **Memory limit:** 256M

In another universe, there exists a sport called PONG!, involving 2 players. In the PONG Finals today, the match proceeds as follows:

- If Player 1 is behind Player 2, then Player 1 will experience a burst of determination and win X points in a streak.
- If Player 2 is behind or equal to Player 1, then Player 2 will seize the opportunity and win Y points in a streak first, followed by Player 1 winning Z points in a streak in retaliation.

Both of these actions are uninterruptible, since the players simply cannot control their emotions in the heat of the intense match.

Who will have a score of L points first and emerge victorious?

Constraints

$$1 \leq X, Y, Z \leq 400$$

$$1 \leq L \leq 10000$$

Input Specification

The first line of input contain 3 integers, X , Y , and Z .

The second line of input will be the integer, L .

Output Specification

Output a single line containing the number of the player who will win.

Sample Input

```
5 2 1
5
```

Sample Output

```
1
```

Explanation for Sample

First, Player 2 wins 2 points, and then Player 1 wins 1 points in retaliation. Then Player 1 wins 5 points in a row and wins the match.