

Can Kelly solve enough code challenges to catch up with Sam?

Sam and Kelly are programming buddies. Kelly resolves to practice more as Sam is ahead initially. They each solve a number of problems daily. Find the minimum number of days for Kelly to have solved more problems than Sam. If Kelly cannot surpass return -1.

Example

samDaily = 3

kellyDaily = 5

difference = 5

Initially, Sam has solved *difference* problems more than Kelly. Each day, they solve *samDaily* and *kellyDaily* problems each.

Day 1: *samSolved* = *difference* + *samDaily* = 5 + 3 = 8

_ *kellySolved*_ = _*kellyDaily* = _5

Day 2: *samSolved* = 8 + 3 = 11

_ *kellySolved*_ = 5 + 5 = 10

Day 3: *samSolved* = 11 + 3 = 14

_ *kellySolved*_ = 10 + 5 = 15

Sam is 5 problems ahead of Kelly and they solve 3 and 5 problems a day. Sam will be ahead by only 3 after the first day, 1 after the second, and Kelly will pass Sam on day 3.

****Function Description ****

Complete the function *minNum* in the editor below.

minNum has the following parameter(s):

samDaily: Number of problems Sam solves in a day

kellyDaily: Number of problems Kelly solves in a day

difference:_ Number of problems Sam is ahead to begin

Return

_int: _the minimum number of days needed by Kelly to exceed Sam, or -1 if it is impossible

Constraints

- $1 \leq \textit{samDaily}, \textit{kellyDaily} \leq 100$

- $0 \leq \text{difference} \leq 100$

Input Format For Custom Testing

Input from stdin will be processed as follows and passed to the function.

The first line contains an integer *samDaily*.

The second line contains an integer *kellyDaily*.

The third line contains an integer *ahead*.

Sample Case 0

Sample Input 0

STDIN Function ----- 3 → samDaily = 3 5 → kellyDaily = 5 1 → difference = 1

Sample Output 0

1

Explanation 0

Sam is 1 problem ahead of Kelly to begin. After 1 day passes, Kelly will have solved 5 problems while Sam will have only solved $1 + 3 = 4$ problems.

Sample Case 1

Sample Input 1

STDIN Function ----- 4 → samDaily = 4 5 → kellyDaily = 5 1 → difference = 1

Sample Output 1

2

Explanation 1

Sam is 1 problem ahead of Kelly to begin. After 1 day passes, Kelly will have solved 5 problems while Sam will have also solved $1 + 4 = 5$ problems. On the second day, Kelly will surpass Sam, $5 + 5 > 1 + 4 + 4$.