Infinite Grid

You are standing on an infinitely large grid with many rows and columns.

Each cell (x, y) in the grid contains the integer x * y (the product of the row number and column number). Initially, you are standing at (1, 1). In one move, you can move from cell (x, y) to either

$$(x, y + 1)$$
 or $(x + 1, y)$ cell.

You are given an integer N, find the minimum number of moves needed to reach a cell that contains the value N.

Constraints:

```
2 \le N \le 10^{12}
```

N is an integer

Input:

N

Note that the input value might not fit into the 32-bit integer data type.

Output:

Print the minimum number of moves needed to reach a square that contains the integer N

Sample Testcases:

Input: 10

Output: 5

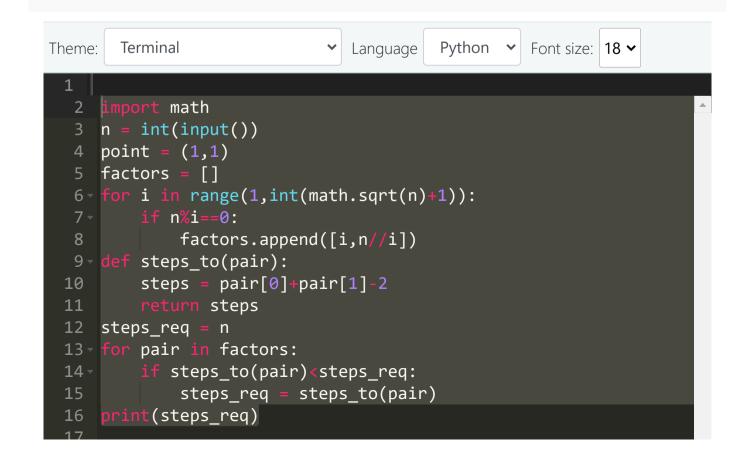
Explanation: Cell (2,5) can be reached in five moves. We cannot reach any cell that contains 10 in less than five moves.

Input: 50

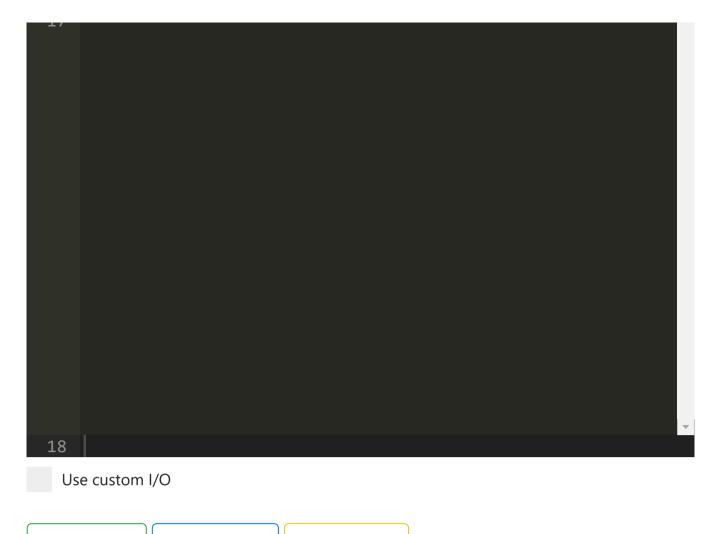
Output: 13

Input: 10000000019

Output: 10000000018



Problem Statistics Author: Muhesh Kumar B Solved By: 3



Run Code

Save Code

Pause Test

Status:

Success your code has passed all test cases!!