Another Contest 5 Problem 1 - Goat Fence

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

Tudor is building a pen for his N goats. N goats need a rectangular pen with area exactly N square meters to roam.

Tudor needs to buy some fencing to demarcate the pen. The fencing comes in one meter units, so the rectangular pen must have side lengths that are an integer number of meters.

Tudor will randomly select, among all such possible rectangular pens with area N square meters, one pen to build. Compute the minimum amount of fencing, in meters, that Tudor needs to buy to guarantee that he can build the randomly selected pen.

Constraints

$1 \leq N \leq 100$

Input Specification

The first and only line of input contains a single positive integer, N.

Output Specification

Output the minimum amount of meters of fencing Tudor must buy.

Sample Input

```
1
```

Sample Output

```
4
```