

Problem L

Lucia's Treasure

Lucía is a young adventurer who has discovered an ancient map that appears to lead to a hidden treasure. The map has a series of mysterious clues, and one of the clues refers to a special number related to her treasure hunt. According to the map, Lucía must find the smallest multiple of a positive integer X that is a perfect square.

A perfect square is an integer that can be expressed as the square of another integer. For example, 1, 4, 9, and 16 are examples of perfect squares.

Lucía is excited about her treasure hunt and needs your help to determine the value of the smallest multiple of X that meets this special condition. If she can find this number, she can advance in her quest and get closer to the hidden treasure.

Given the value of X , your task is to find the smallest multiple of X that is a perfect square or indicate that no such multiple exists.

Input

The input consists of a single line containing a positive integer X ($1 \leq X \leq 10^9$).

Output

You should print a single integer, which is the smallest multiple of X that is a perfect square. It's guaranteed that such multiple exists.

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|------------------------------|-------------------------------|
| Input example 1 3 | Output example 1 9 |
| Input example 2 16 | Output example 2 16 |
| Input example 3 12 | Output example 3 36 |