

Problem A

Artistic Souvenir

Time limit: 1 second

Delft is world-famous for its blue and white pottery (also known as *Delfts blauw*), and the earliest pieces date back to the 16th century.

During a stroll in Delft, Christiaan sees a lot of beautifully painted pottery objects like plates, tiles, and vases in the souvenir shops. Inspired by those, he decides to hand paint such a square tile himself. He has already picked a circular design he wants to place in the middle of the tile. He would like to leave a margin of at least 1 cm around the design. Now, Christiaan just needs to buy a square tile of a suitable size.



A typical circular design on a square Delft tile.

Given the area of the circular design, what is the minimum area of the square tile?

Input

The input consists of:

- One line with an integer a ($1 \leq a \leq 10^{15}$), the area of the circular design in cm^2 .

Output

Output the minimum area of the square tile in cm^2 that is needed for a design with area a if Christiaan wants to leave a margin of at least 1 cm around the design.

Your answer should have an absolute or relative error of at most 10^{-9} .

Sample Input 1

42

Sample Output 1

86.7269920446

Sample Input 2

20231125

Sample Output 2

25779373.7414336279

This page is intentionally left blank.