

# 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  $\text{cm}^2$ .

### Output

Output the minimum area of the square tile in  $\text{cm}^2$  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

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