

Root of All

Problem Description

Given a number N, output

$$\sum_{i=1}^N \sqrt{i}$$

Note

Your answer should be correct upto 6 decimal places. That means the output and the correct answer should match exactly atleast till the 6th digit after the decimal point.

Mathematically, if your output is A and the correct answer is B, then

$$|A-B| \leq 10^{-6}$$

Constraints

$$0 < N \leq 1e5$$

Input Format

A single integer N

Output Format

The answer as described above, correct upto atleast 6 decimal places

Sample Input 1

4

Sample Output 1

6.14626437

Sample Input 2

15

Sample Output 2

40.46919660