A Math Contest P6 - Global Maximum

Time limit: 0.5s **Memory limit:** 512M

You are given integers N and M. Among all real solutions (a,b,c,d) to the equations a+b+c+d=N and $a^2+b^2+c^2+d^2=M$, what is the maximal value of d?

Constraints

$$-10^3 < N < 10^3$$

$$0 \leq M \leq 10^6$$

Input Specification

The only line contains two space-separated integers, N and M.

Output Specification

If there are no solutions, output [no]; otherwise, output the maximal value of d.

Your answer will be accepted if the absolute error is within 10^{-6} .

Sample Input

7 13

Sample Output

2.500000

Explanation for Sample

The maximal value of d is reached at (a, b, c, d) = (1.5, 1.5, 1.5, 2.5).