Lattice Points Count

February 4, 2024

1 Problem Statement

Given a circle C centered at the origin with radius r and a straight line L defined by $y = k$, determine the number of lattice points strictly inside the circle C and strictly above the line L.

2 Constraints

1. $1 \leq r \leq 10^6$

2. $-10^6 \leq k \leq 10^6$

3. Both r and k are real numbers.

3 Input Format

$r\ k$

example:
103.678 12.908

4 Output Format

Output a single integer.

example:
14291