Time limit: 2.0s Memory limit: 64M

Melanie has a circular desk and many Newton's cradles she wants to fit on it. If the center of the desk is treated as (0,0) and each Newton's cradle can only be placed on a lattice point (points with integer coordinates), what is the maximum amount of Newton's cradles that can be placed on the desk given radius R ($1 \le R \le 100$)?

Input Specification

A single integer, R.

Output Specification

The number of cradles that can be put on the desk.

Sample Input

1

Sample Output