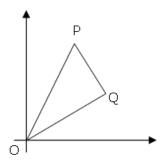
HackerRank

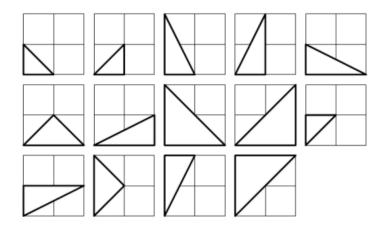
Project Euler #91: Right triangles with integer coordinates

This problem is a programming version of Problem 91 from projecteuler.net

The points $P(x_1,y_1)$ and $Q(x_2,y_2)$ are plotted at integer co-ordinates and are joined to the origin, O(0,0), to form ΔOPQ .



There are exactly fourteen triangles containing a right angle that can be formed when each co-ordinate lies between 0 and 2 inclusive; that is, $0 \le x_1, y_1, x_2, y_2 \le 2$.



Given that $0 \leq x_1, y_1, x_2, y_2 \leq N$, how many right triangles can be formed?

Input Format

First and only line contains N.

Constraints

 $2 \le N \le 2500$

Output Format

Output the required count.

Sample Input

2

Sample Output

14