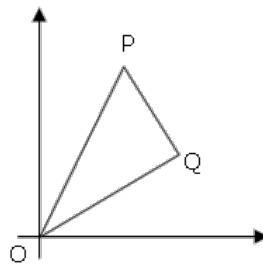


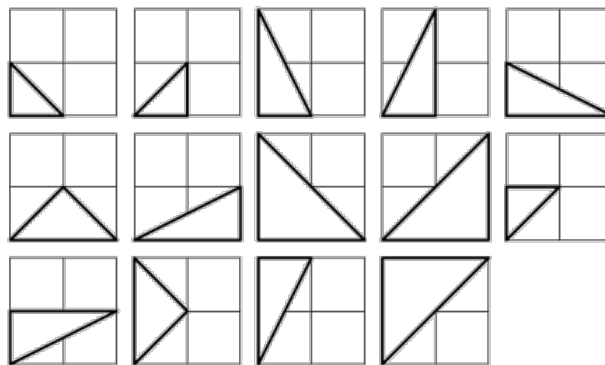
Project Euler #91: Right triangles with integer coordinates

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 $\triangle OPQ$.



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, $0 \leq x_1, y_1, x_2, y_2 \leq 2$.



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

$$2 \leq N \leq 2500$$

Output Format

Output the required count.

Sample Input

2

Sample Output

14