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 $0 \le x_1, y_1,x_2,y_2 \le N$, 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
```