High Five

Time limit: 2 sec.
Memory limit: 512MB

Description

Mengistu is very tall. Because he also has long arms, we can however do high five with him.

Have you ever heard about Hongman Choi? He was a Seerum, a Korean traditional wrestling, player and was a K1 fighter. He is colossal, his height is over 2 meters! Do you think you can high five with him?

There are n people. You are given the height of their shoulders, and the length of their arms. Let a person have the height of shoulder s_1, and the length of arm a_1. Then, he can hold his hand at any height between $s_1 - a_1$ and $s_1 + a_1$, inclusively. Thus, if another person has the height of shoulder s_2 and the length of arm a_2, and if $(s_1 - a_1, s_1 + a_1)$ and $(s_2 - a_2, s_2 + a_2)$ overlap, then they can do high five without bending their knees or their bodies.

How many pair of people can do high five?

Input

The first line contains an integer n, the number of people. (1

<= n <= 10,000) The following n lines contains two integers s_i and a_i, the height of shoulder and the length of arm of person i. (1 <= s_i, a_i <= 300)

Output

Print the number of pairs they can do high five.

Sample I/O

Input(s)	Output(s)
3 100 30 170 45 220 55	2

Note: The first person and the last person cannot do high five.