SET OF CIRCLES

Consider n distinct circles where the centers are arranged on a line. Let the i-th circle has the center x_i and radius w_i. Let's find the maximum number of circles from n circles such that the distance between any pair of center of circles i *and* j is not less than the sum of their radius, or more formally: $|x_i - x_j| \geq w_i + w_j$.

Input

The first line contains the integer n ($1 \leq n \leq 200\,000$) — the number of circles.

Each of the next n lines contains two numbers x_i, w_i ($0 \leq x_i \leq 10^9$, $1 \leq w_i \leq 10^9$) — the center and the radius of a circle.

Output

Print a single number — the size of maximum number of circles that satisfied this condition.

Examples

Standard Input	Standard Output
4 2 5 3 1 6 1 0 2	3