Problem A. Intervals

Time limit	2000 ms
Mem limit	65536 kB
OS	Linux

You are given n closed, integer intervals [ai, bi] and n integers c1, ..., cn.
Write a program that:
reads the number of intervals, their end points and integers c1, ..., cn from the standard input,
computes the minimal size of a set Z of integers which has at least ci common elements with interval [ai, bi], for each i=1,2,...,n,
writes the answer to the standard output.

Input
The first line of the input contains an integer n (1 <= n <= 50000) -- the number of intervals. The following n lines describe the intervals. The (i+1)-th line of the input contains three integers ai, bi and ci separated by single spaces and such that 0 <= ai <= bi <= 50000 and 1 <= ci <= bi - ai+1.

Output
The output contains exactly one integer equal to the minimal size of set Z sharing at least ci elements with interval [ai, bi], for each i=1,2,...,n.

Sample

Input	Output
5 3 7 3 8 10 3 6 8 1 1 3 1 10 11 1	6