	<b>2663 - Intervals</b> Europe - Central - 2002/2003				
	PDF	PostScript	<u>Submit</u>		<b>Ranking</b>

You are given *n* closed, integer intervals  $[a_i, b_j]$  and *n* integers  $c_1, ..., c_n$ .

Write a program that:

- reads the number of intervals, their endpoints and integers  $c_1, ..., c_n$  from the standard input,
- computes the minimal size of a set Z of integers which has at least  $c_i$  common elements with interval  $[a_i, b_i]$ , for each i = 1, 2, ..., n,
- writes the answer to the standard output.

## Input

The first line of the input cointains an integer indicating the number of datasets. It's followed by a blank line. The first line of each dataset contains an integer n ( $1 \le n \le 50000$ ) - the number of

intervals. The following *n* lines describe the intervals. The line i + 1 of the dataset contains three integers  $a_i, b_i, c_i$  separated by single spaces and such that  $0 \le a_i \le b_i \le 50000$  and  $1 \le c_i \le b_i - a_i + 1$ . There is a blank line between datasets.

## Output

The output for each dataset contains exactly one integer equal to the minimal size of a set Z sharing at least  $c_i$  elements with interval  $[a_i, b_i]$ , for each i = 1, 2, ..., n. Print a blank line between datasets.

## **Sample Input**

## **Sample Output**

б

Central 2002-2003