Dinner Time!

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

After a difficult day of work, the programming police are planning dinner at the police HQ. There are N intervals $[A_i, B_i)$ that represent N programming police labeled 1 through N coming and leaving for dinner at different times such that each police officer i uses P_i plates for dinner. At any given point, the number of plates on the table is the sum of the number of plates over all police officers that are eating at the table at that time. Given that the police commissioner will arrive at the table at any random time between time 0 and the time the last police officer finishes eating, what is the floor of expected number of plates he will see on the table?

Input

Line 1: N
Lines 2...N+1: A_i, B_i, P_i

Output

Line 1: Expected number of plates seen on the table

Example

standard input	standard output
2 0 100 2 66 69 3	2

Note

$1 \leq N \leq 100,000$
$1 \leq A_i, B_i \leq 10^9$
$1 \leq P_i \leq 1,000$