

B. Checkout Assistant

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Bob came to a cash & carry store, put n items into his trolley, and went to the checkout counter to pay. Each item is described by its price c_i and time t_i in seconds that a checkout assistant spends on this item. While the checkout assistant is occupied with some item, Bob can steal some other items from his trolley. To steal one item Bob needs exactly 1 second. What is the minimum amount of money that Bob will have to pay to the checkout assistant? Remember, please, that it is Bob, who determines the order of items for the checkout assistant.

Input

The first input line contains number n ($1 \leq n \leq 2000$). In each of the following n lines each item is described by a pair of numbers t_i, c_i ($0 \leq t_i \leq 2000$, $1 \leq c_i \leq 10^9$). If t_i is 0, Bob won't be able to steal anything, while the checkout assistant is occupied with item i .

Output

Output one number — answer to the problem: what is the minimum amount of money that Bob will have to pay.

Examples

input
4 2 10 0 20 1 5 1 3
output
8

input
3 0 1 0 10 0 100
output
111