

Plate Pirate

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

A large shipping vessel carrying plates is passing by Programmington and Chris the Cyber Criminal has seized the opportunity to turn an unethical profit. There are N plates, each with a (potentially negative) value V_i and a size S_i . Although Chris can only hold one plate, he has infinite strength and can stack a plate on top of any other plate that is strictly larger than it. Determine the maximum value Chris can steal from the shipping vessel.

Input

Line 1: The integer N
Line 2.. N +1: The space-separated values S_i , V_i , for plate i

Output

Line 1: The maximum value

Example

standard input	standard output
5 1 5 3 -4 2 7 1 3 5 2	14

Note

$1 \leq N \leq 1,000$
 $1 \leq S_i \leq 50$
 $-1,000 \leq V_i \leq 1,000$