Picky Thief (Easy)

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 megabytes

The only difference between the easy and hard version of the problem is the size of the constraints. Please read both the problems carefully

A thief breaks into the house and encounters n items of value v_i and weight w_i. Fortunately, he can't lift more than W kgs so we can't steal items of total weight more than W. Can you calculate the maximum total value of the items the thief can steal?

Note: Breaking an item makes its value zero. Thus the thief will never break any item.

Input

The first line contains the number of items $1 \leq n \leq 100$ and $1 \leq W \leq 10^4$

This is followed by n lines, each containing two integer v_i and w_i $(0 \leq v_i, w_i \leq 10^4)$ — the value and weight of the i^{th} item.

Output

Print a single non-negative integer d where d is the maximum total value of items the thief could have stolen.

Note: Value of maximum total value of items the thief could have stolen doesn't exceed 10^4, i.e. $d \leq 10^4$

Examples

standard input	standard output
3 8 30 3 50 4 60 5	90
6 15 6 5 5 6 4 6 6 6 5 3 2 7	17