Luck Balance

Lena is preparing for an important coding competition that is preceded by a number of sequential preliminary contests. Initially, her luck balance is 0. She believes in "saving luck", and wants to check her theory. Each contest is described by two integers, L[i] and T[i]:

- L[i] is the amount of luck associated with a contest. If Lena *wins* the contest, her luck balance will *decrease* by L[i]; if she *loses* it, her luck balance will *increase* by L[i].
- T[i] denotes the contest's *importance rating*. It's equal to 1 if the contest is *important*, and it's equal to 0 if it's *unimportant*.

If Lena loses no more than k *important* contests, what is the maximum amount of luck she can have after competing in all the preliminary contests? This value *may* be negative.

Example			
k =	2		
L =	[5, 1, 4]		
T =	[1, 1, 0]		

Contest	L[i]	T[i]
1	5	1
2	1	1
3	4	0

If Lena loses all of the contests, her will be 5 + 1 + 4 = 10. Since she is allowed to lose 2 important contests, and there are only 2 important contests, she can lose all three contests to maximize her luck at 10.

If k = 1, she has to win at least 1 of the 2 important contests. She would choose to win the lowest value important contest worth 1. Her final luck will be 5 + 4 - 1 = 8.

Function Description

Complete the *luckBalance* function in the editor below.

luckBalance has the following parameter(s):

- *int k*: the number of important contests Lena can lose
- *int contests[n][2]:* a 2D array of integers where each contests[i] contains two integers that represent the luck balance and importance of the i^{th} contest

Returns

• int: the maximum luck balance achievable

Input Format

The first line contains two space-separated integers n and k, the number of preliminary contests and the maximum number of important contests Lena can lose.

Each of the next n lines contains two space-separated integers, L[i] and T[i], the contest's luck balance and its importance rating.

Constraints

- $1 \le n \le 100$
- $0 \leq k \leq N$
- $1 \leq L[i] \leq 10^4$
- $T[i]\in\{0,1\}$

Sample Input

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STDIN Function
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6 3 n = 6, k = 3
5 1 contests = [[5, 1], [2, 1], [1, 1], [8, 1], [10, 0], [5, 0]]
2 1
1 1
8 1
10 0
5 0
```

Sample Output

29

Explanation

There are n = 6 contests. Of these contests, 4 are important and she cannot lose more than k = 3 of them. Lena maximizes her luck if she wins the 3^{rd} important contest (where L[i] = 1) and loses all of the other five contests for a total luck balance of 5 + 2 + 8 + 10 + 5 - 1 = 29.