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Luck Balance ☆

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Lena is preparing for an important coding competition that is preceded by a number of sequential preliminary contests. 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.

For example, $k = 2$ and:

```
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. It should return an integer that represents the maximum luck balance achievable.

luckBalance has the following parameter(s):

- k: the number of important contests Lena can lose

- contests: a 2D array of integers where each $contests[i]$ contains two integers that represent the luck balance and importance of the ith contest.

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

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

Output Format

Print a single integer denoting the maximum amount of luck Lena can have after all the contests.

Sample Input

```
6 3
5 1
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 3rd important contest (where $L[i] = 1$) and loses all of the other five contests for a total luck balance of $5 + 2 + 8 + 10 + 5 - 1 = 29$.

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Difficulty   Easy
Max Score   20
Submitted By   34531

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JavaScript (Node.js) ⌄   ↺ ⛶ ⚙

```
1    'use strict';
2
3    const fs = require('fs');
4
5    process.stdin.resume();
6    process.stdin.setEncoding('utf-8');
```

```
 7
 8    let inputString = '';
 9    let currentLine = 0;
10
11    process.stdin.on('data', inputStdin => {
12        inputString += inputStdin;
13    });
14
15    process.stdin.on('end', function() {
16        inputString = inputString.replace(/\s*$/, '')
17            .split('\n')
18            .map(str => str.replace(/\s*$/, ''));
19
20        main();
21    });
22
23    function readLine() {
24        return inputString[currentLine++];
25    }
26
27    // Complete the luckBalance function below.
28    function luckBalance(k, contests) {
29
30
31    }
32
```

Line: 1 Col: 1

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