Dorsey Thief

HackerRank

Mr. Dorsey Dawson recently stole X grams of gold from ACME Jewellers. He is now on a train back home. To avoid getting caught by the police, he has to convert all the gold he has into paper money. He turns into a salesman and starts selling the gold in the train.

There are N passengers who have shown interest in buying the gold. The i^{th} passenger agrees to buy a_i grams of gold by paying v_i dollars. Dawson wants to escape from the police and also maximize the profit. Can you help him maximize the profit?

Note: The i^{th} passenger would buy **exactly** a_i grams if the transaction is successful.

Input Format

The first line contains two space separated integers, N and X, where N is the number of passengers who agreed to buy and X is the stolen amount of gold (in grams).
N lines follow. Each line contains two space separated integers - v_i and a_i, where v_i is the the value which the i^{th} passenger has agreed to pay in exchange for a_i grams of gold.

Constraints

- $1 \leq X \leq 5000$
- $1 \leq N \leq 10^6$
- all v_i's and a_i's are less than or equal to 10^6 and greater than 0.

Output Format

If it's possible for Dorsey to escape, print the maximum profit he can enjoy, otherwise print `Got caught!`.

Sample Input 0

```
4 10
460 4
590 6
550 5
590 5
```

Sample Output 0

```
1140
```

Explanation 0

Selling it to passengers buying 4 grams and 6 grams would lead to 1050 dollars whereas selling it to passengers buying 5 grams gold would lead to 1140 dollars. Hence the answer.

Sample Input 1

```
4 9
100 5
120 10
300 2
500 3
```

Sample Output 1

```
Got caught!
```

Explanation 1

There is no way to sell all 9 grams of gold.