

Workers Roadmap

Problem ID: workersroadmap

Time limit: 1 second

A business received a big order for M products, they must deliver as soon as possible but there is nothing left in the warehouse, they have to produce from scratch. They have N workers, worker i produce A_i products every day but take 1 day of leave after every B_i days of work. Calculate what's the earliest day they can finish producing M products to deliver.

Input

The first line of input contains 2 integers N and M ($1 \leq N \leq 100$, $1 \leq M \leq 10^{15}$), the number of workers and number of products ordered.

The next N lines, each has 2 numbers A_i and B_i ($1 \leq A_i, B_i \leq 10^{15}$).

Output

Output one integer, the number of days it take.

Sample Input 1

2 30	11
2 5	
1 9	

Sample Output 1