

Operation costs

A ticket inspector of the Budapest-Székesfehérvár train logged the number of passengers getting on and off at each of the stops. (There are no people getting off at Budapest, and no people getting on at Székesfehérvár. No people get on after getting off.)

Write a program that tells whether it is economical to operate the train if a passenger pays N HUF for each traveled stop, and it costs M HUF to operate the train between 2 stops.

Input

The first line of the *standard input* contains the count of stops ($1 \leq S \leq 1000$). The second line contains the amount a passenger has to pay per stop ($0 < N \leq 100$), and the operation cost between 2 stops ($1 \leq M \leq 100000$). The next N lines each contain the count of people getting on ($0 \leq ON \leq 800$) and getting off ($0 \leq OFF \leq 800$) at a stop.

Output

The first line of the *standard output* should contain 1 if it is economic to operate the train, and 0 if not.

Example

<i>Input</i>	<i>Output</i>
6	1
100 1000	
0 15	
10 30	
0 32	
48 0	
20 27	
26 0	

Limits

Time limit: 0.1 second

Memory limit: 32 MB