Problem K. Bloodseeker

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

Bloodseeker is facing n enemies. At the beginning, he has m hit-points, and every second his hit-points are decreased by 1. If his hit-points become 0, he dies. But he can kill the enemies to regenerate his hit-points.

The i-th enemy is to be hit t_i times to kill. Bloodseeker makes one hit per second. Every second, he is able to hit any enemy. After the i-th enemy receives a last hit, Bloodseeker regenerates h_i hit-points (but his hit-points can't become greater than m). Note that if Bloodseeker had 1 hit-point before he last-hits the i-th enemy, he doesn't die.

Can Bloodseeker kill all enemies?

Input

The first line contains an integer T ($1 \le T \le 200000$) — the number of test cases.

The first line of each test case contains two integers n and m ($1 \le n \le 200000, 1 \le m \le 10^9$) — the number of enemies and the maximal Bloodseeker's hit-points.

Each of the next n lines in each test case contains two integers t_i and h_i ($1 \le t_i, h_i \le 10^9$) — the time required for killing the i-th enemy and the number of hit-points regenerated after it.

It is guaranteed that the sum of all n does not exceed 200000.

Output

For each test case, if it's possible to kill all the enemies, output "YES", otherwise output "NO".

Example

standard input	standard output
4 2 10 7 3 6 1 2 10 7 3 7 1 3 10 5 7 5 7 14 1 3 10 5 7 5 7 15 1	YES NO YES NO