Be Awesome As Barney Stinson

Barney Stinson ;) is way too flirty. He has many girlfriends and he wants to keep all of them happy. He has **M** girlfriends. He bought **N** gifts for them. Now he knows that some girlfriends need more gifts and some need less. So he decided that he will give atleast **Ai** gifts and at most **Bi** gifts to his **i**th girlfriend. He has to give away all the **N** gifts. Tell us in how many different ways he can do this.

INPUT:

For each test case, first line contains two integers **M** and **N,** then follows M lines each having two integers **Ai** and **Bi** (1<=i<=M). Input ends with M and N both equal to 0 and that case should not be processed.

OUTPUT:

For each test case, output the number of different ways in which he can distribute those gifts in a single line.

Example:

Input:

3 5

0 1

1 3

1 4

0 0

Output:

6

Explanation: He can distribute 5 gifts in his 3 girlfriends in 6 different ways as follows (0 1 4), (0 2 3), (0 3 2), (1 1 3), (1 2 2), (1 3 1).

Constraints: 1<=M<=20, 1<=N<=100, 0<=Ai,Bi,<=100