

Same Segment

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 1024 mebibytes

You have a sequence a of N integers between 0 and K inclusive. M segments are given, where i th segment is $[l_i, r_i]$. We want $\sum_{j=l_i}^{r_i} a_j = K$ to satisfy for every segment. Determine whether there exists such sequence a .

Input

Each test data contains one or more test cases. The first line contains an integer T — the number of test cases for this input file.

First line of each test case contains 3 integers N, M, K .

i -th of the next M lines contain two integers l_i and r_i : left and right end of i -th segment.

Output

For each test case, if a sequence that satisfies the condition exists, output the elements of the sequence. In case of multiple answers you may output any of them.

If no valid sequence exists, output a single integer -1 .

Scoring

- $1 \leq T \leq 10^5$
- $2 \leq N \leq 4 \times 10^5$
- $1 \leq M \leq \min\left(2 \times 10^5, \frac{N(N+1)}{2}\right)$
- $1 \leq K \leq 20$
- $1 \leq l_i \leq r_i \leq N$
- $(l_i, r_i) \neq (l_j, r_j)$ for $i \neq j$
- Sum of N over every test case does not exceed 4×10^5 .
- Sum of M over every test case does not exceed 2×10^5 .

Example

standard input	standard output
4	1 1 1 1 1 1
6 3 3	-1
1 3	1 0 0 1
2 4	10 10 10
3 5	
4 6 2	
1 2	
1 3	
1 4	
2 3	
2 4	
3 4	
4 4 1	
1 2	
3 4	
1 3	
2 4	
3 3 10	
1 1	
2 2	
3 3	