

Problem G. Game: Celeste

Input file: standard input
Output file: standard output
Time limit: 2.5 seconds
Memory limit: 1024 megabytes

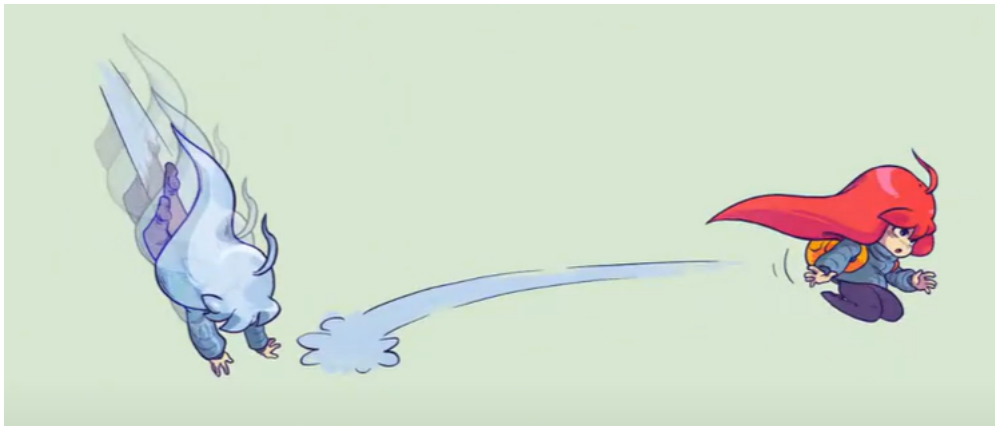
Happy Wavedashing!

— Wavedash and You

Madeline is climbing Celeste mountain. The current section contains n pillars located at position $x_1, x_2, \dots, x_n$. There is no ground between adjacent pillars, so Madeline can only move from pillar to pillar without stopping in the middle. The i -th pillar contains a strawberry of size a_i on top of it. Whenever Madeline is on a pillar, she can choose to collect the strawberry on the pillar.

Madeline has learned the wavedash technique on the first pillar and she wants to practice the technique through this section. However, due to wind conditions, Madeline's wavedash can only bring her to a position in $[x + L, x + R]$, where x is the Madeline's current position.

After arriving at the n -th pillar, Madeline will evaluate her technique using the strawberries she collected. When comparing two sequences of strawberries, she will sort the strawberries by size in non-increasing order and then compare the lexicographic order of the ordered strawberry sequences. She will be more satisfied if the lexicographic order is larger.



Before putting her theory into practice, Madeline wants to plan a route from pillar 1 to pillar n which gives her the maximum satisfaction possible. Please help Madeline.

Input

The input contains multiple test cases.

The first line contains an integer T , denoting the number of test cases.

For each test case, the first line contains three integer n, L, R ($1 \leq n \leq 10^6, 1 \leq L \leq R \leq 10^9$), denoting the number of pillar and the parameters of wavedash.

The second line contains n integers, the i -th integer is x_i ($1 \leq x_i \leq 10^9$), denoting the position of the i -th pillar. It is guaranteed that $x_i < x_{i+1}$ for $1 \leq i < n$.

The third line contains n integers, the i -th integer is a_i ($1 \leq a_i \leq n$), denoting the size of the strawberry on the i -th pillar.

It is guaranteed that the sum of n over all test cases is no more than 10^6 .



Output

For each test case, if Madeline can't reach the n -th pillar, output -1 . Otherwise output two lines. The first line contains one integer k , the number of strawberries Madeline have collected. The second line contains k integers, denoting the size of the strawberries Madeline have collected in non-increasing order.

Example

standard input	standard output
2	3
5 2 3	5 4 3
1 2 3 4 5	-1
5 2 3 1 4	
3 1 2	
1 4 7	
3 3 3	