How many subsequences

Tom has again maths , and the teacher writes countless tables with exercises .... so boring. Then he remembers an old problem of informatics that he thought in a dream . He remembered , he has a number of positive integers and the job was to know how many subsequences that have between L and U distinct elements exist in that range. So the boring hour will pass quicker . But he needs your help , he is to exhausted after two hours of math with the agitated teacher .

Input

The first line of input file contains positive N, L, U. following N lines will contain a positive integer, each representing an element of the series.

Output

The first line of the output will display the number of sequences containing between L and U distinct elements.

Example

Input:
4 1 2
231
19
7
19

Output:
8

Notes:

1<= L <= U <= N <= 2^20
The value of an item number is a positive integers [1,2^32-1];
A subsequence is a lot of items that appear on consecutive positions in the initial row.
Be carefull with certain languages.Large imput data.
Tom thanks you for solving this problem and he awards you with points.