

At least y

You are given an array A of length n and a fixed integer y . You need to handle q queries on this array, the queries being of two kinds :

1. $l \ r \ x$: Set all the elements with indices from l to r to x . i.e. assign $A_i := x \ \forall l \leq i \leq r$
 2. $l \ r$: Report the number of elements with indices in the range l to r such that $A_i \geq y$
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Input Format

The first line contains three integers : n , y and q .

The next line contains n space separated integers denoting the elements of A .

The next q lines contain a query each. Here,

- 1 $l \ r \ x$ denotes a query of the first type
 - 2 $l \ r$ denotes one of the second type
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Output Format

Print an integer each on a new line corresponding to the queries of the second type.

Constraints

- $1 \leq n \leq 2 \times 10^5$
 - $1 \leq y \leq 10^{17}$
 - $1 \leq q \leq 2 \times 10^5$
 - $1 \leq A_i \leq 10^{17}$
 - $1 \leq l, r \leq n$
 - $1 \leq x \leq 10^{17}$
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Sample

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5 7 4
1 2 3 4 5
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2 1 5
1 2 4 10
2 1 3
2 4 4

0
2
1