Kool matrices (Easy)

(The difference between easy and hard versions of the problem is that, in the harder version **K is not fixed**)

You are given an array A with N elements, $A_1, A_2, \ldots, A_N$.

Using this array, let us construct a N x N matrix M in the following way: $M_{i,j} = A_i + A_j$.

A Kool matrix is a submatrix of M with dimensions K x K such that $1 \leq K \leq N$.

The strength of a matrix is defined as the sum of values of all the elements present in that matrix.

You are given two integers K and X. You have to find the number of Kool matrices of size K having strength equal to X.

Input

First line contains two integers N ($1 \leq N \leq 10^5$) and K ($1 \leq K \leq N$), denoting the length of the array and the side length of the Kool matrix respectively.

Next line will contain N spaced integers denoting the elements of the array ($1 \leq A_i \leq 100$).

Next line will contain an integer X ($1 \leq X \leq 10^{11}$).

Output

A single integer denoting the number of Kool matrices having equal to X.

Example

Input

```
5 3
1 2 3 4 6
57
```

Output

```
2
```

Explanation

Constructing the matrix M from the array:

```
2 3 4 5 7
3 4 5 6 8
4 5 6 7 9
5 6 7 8 10
7 8 9 10 12
```

There will be 9 Kool matrices of M, with strength:

```
36 45 57
45 54 66
57 66 78
```

2 Kool matrices: K_{11} = {$M_{13}, M_{14}, M_{15}, M_{23}, M_{24}, M_{25}, M_{33}, M_{34}, M_{35}$} and K_{22} = {$M_{31}, M_{32}, M_{33}, M_{41}, M_{42}, M_{43}, M_{51}, M_{52}, M_{53}$}, have strength equal to X = 57.

Clarifications

Assignment 4 - 3 days 00:23:16

No clarifications have been made at this time.

Request clarification