Problem E. Minima

Input file:	`minima.in`
Output file:	`minima.out`
Time limit:	3 seconds
Memory limit:	256 megabytes

You are given an array $x[1 \ldots n]$ and a number m. For all i from 1 to $n-m+1$ find the minimum among $x[i], x[i+1], \ldots, x[i+m-1]$ and return the sum of those minima.

Input

The first line of the input file contains three integer numbers: n, m and k ($1 \le n \le 30\,000\,000$, $1 \le m \le n$, $2 \le k \le \min(n, 1000)$). The second line of the input file contains three integer numbers: a, b and c ($-2^{31} \le a, b, c \le 2^{31}-1$). The third line of the input file contains k integer numbers: $x[1], x[2], \ldots, x[k]$ ($-2^{31} \le x[i] \le 2^{31}-1$).

The rest of the array is calculated using the following formula: $x[i] = f(a \cdot x[i-2] + b \cdot x[i-1] + c)$. Here $f(y)$ returns such number $-2^{31} \le z \le 2^{31}-1$ that $y - z$ is divisible by 2^{32}.

Output

Print one integer number — the sum of minima of all subarrays of length m of the given array.

Example

minima.in	minima.out
10 3 2 1 1 0 0 1	33
1000000 15 5 283471207 23947205 3 17625384 939393931 1838388 912740247 290470294	-1879262596173354