Padmavati

Problem Statement:

Many cinemas halls in Jaipur have released the film Padmavati but a powerful organization's sentiments have been hurt and they do not want anyone to see the parts of the film that have hurt their sentiments. They can achieve this by either burning the cinema halls that are screening the movie or by applying another strategy to remove all offensive scenes from the movie.

There are n cinema halls that are screening the film and the powerful organization has assigned a random integer (a1, a2, …, an) to each one of them. Now, if the gcd of all the assigned integers is equal to 1, the audience will be able to view all objectionable scenes. They can either burn a certain cinema hall, which would involve removing that hall's integer from the list or replace the assigned integer with another integer, to ensure that the gcd of all integers is not one, which would remove all offensive scenes from the film.

The hard work required to burn any cinema hall is x and that to increase the value of its assigned integer by 1 is y. What is the minimum hard work in which they can achieve their objectives?

Input Format:

The first line contains three integers *n, x and y* — the number of cinema halls that are screening the movie and the hard work required to burn and increase a cinema hall's assigned integer respectively.

The second line contains n integers a_1, a_2, ….., a_n - the initial assigned integers to the cinema halls.

Output Format:

Print a single number, the minimum hard work required by them to ensure nobody gets to see the objectionable scenes..

Constraints:

- $1 \leq n \leq 5*10^5$
- $1 \leq a_i \leq 10^6$
- $1 \leq x, y \leq 10^9$

Sample Input:

4 23 17
1 17 17 16

Sample Output:

40