Traveling in Cells 3

Input file:	`standard input`
Output file:	`standard output`
Time limit:	4 seconds
Memory limit:	1024 megabytes

Have you ever traveled to the Kingdom of Little Cyan Fish? It is a beautiful — maybe even magical — land, imagined as a straight line of $(2 \times 10^{100} + 1)$ cells, numbered consecutively from -10^{100} to 10^{100}. The Motto of the Kingdom "*In Code We Trust*", reflects the importance of competitive programming in this lovely place. Its pride and glory is the Universal Cup.

Figure 1: Hosting The 2nd Universal Cup Finals.

The president of the kingdom — none other than the Little Cyan Fish — is about to choose the host city for The 3rd Universal Cup Finals, scheduled for 2026. There are n qualified teams, with the i-th team currently residing in cell x_i.

Before the finals begin, all teams must travel to the chosen host cell. In the kingdom, there are two possible modes of transportation:

- Railway: The kingdom has a main rail line, where each cell i is directly connected to $i-1$ and $i+1$. Moving between two adjacent cells costs 1 dollar.
- Air flights: Each cell also has an airport. From cell i, flights are available to $i-a$ or $i+a$, each at a fixed cost of b dollars.

Little Cyan Fish does not care how long the journey takes, but the total travel cost is a serious concern, as the budget is limited. Your task is to determine the minimum total amount of money Little Cyan Fish must prepare if the host cell is chosen optimally.

Input

There are multiple test cases in a single test file. The first line of the input contains an integer T ($T \geq 1$) indicating the number of test cases. For each test case:

The first line of the input contains three integers n, a and b ($n \geq 1$, $1 \leq a, b \leq 10^{12}$), indicating the number of the qualified teams, and the parameters of the airlines.

The next line of the input contains n integers $x_1, x_2, \cdots, x_n$ ($-10^{12} \leq x_i \leq 10^{12}$), indicating the initial position of each team.

It is guaranteed that the sum of n over all test cases does not exceed 3×10^5.

Output

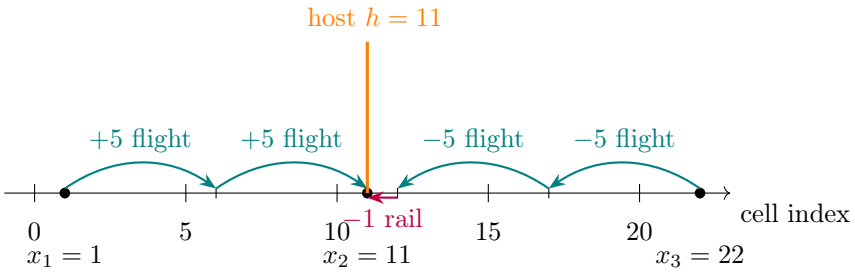
For each test case, output a single line containing a single integer, indicating the answer.

Example

standard input	standard output
3 3 5 1 1 11 22 4 5 3 1 3 5 8 7 6 3 2 9 15 24 33 40 53	5 7 55

Note

For the first test case, one of the optimal plans is to host The 3rd Universal Cup Finals at the 11-th cell.



$a = 5,\ b = 1$
Paths: $1 \to 6 \to 11$: \$2; 11 : \$0;
$22 \to 17 \to 12 \to 11$: \$3
Total: \$5