

Cops and the Thief Devu

Problem Code: **COPS**

There are 100 houses located on a **straight line**. The first house is numbered 1 and the last one is numbered 100. Some **M** houses out of these 100 are occupied by cops.

Thief Devu has just stolen PeePee's bag and is looking for a house to hide in.

PeePee uses fast 4G Internet and sends the message to all the cops that a thief named Devu has just stolen her bag and ran into some house.

Devu knows that the cops run at a maximum speed of **x** houses per minute in a straight line and they will search for a maximum of **y** minutes. Devu wants to know how many houses are safe for him to escape from the cops. Help him in getting this information.

Input

First line contains **T**, the number of test cases to follow.

First line of each test case contains 3 space separated integers: **M**, **x** and **y**.

For each test case, the second line contains **M** space separated integers which represent the house numbers where the cops are residing.

Output

For each test case, output a single line containing the number of houses which are safe to hide from cops.

Constraints

- $1 \leq T \leq 10^4$
 - $1 \leq x, y, M \leq 10$
-

Example

Input :

3

4 7 8

12 52 56 8

2 10 2

21 75

2 5 8

10 51

Output :

0

18

9

Explanation

Example 1 : Cops in house 12 can cover houses 1 to 68, and cops in house 52 can cover the rest of the houses. So, there is no safe house.

Example 2 : Cops in house 21 can cover houses 1 to 41, and cops in house 75 can cover houses 55 to 95, leaving houses numbered 42 to 54, and 96 to 100 safe. So, in total 18 houses are safe.