

3- Windy Walk

Input File: WindyWalkIn.txt

Logan lives in a windy neighborhood, and walks outdoors for exercise. On some days, the wind gusts are so strong that they drive him back one, or more, steps per gust. Assuming his forward and backward steps are exactly the same length and each step takes one second, calculate the time it takes him to reach his destination given the number of forward steps between his starting point and his destination, d , and his forward and backward step sequence.

Forward motions in the step sequence are represented by positive integers, and backward motions are represented by negative integers. For example, if Logan's walk consisted of 2 forward steps, 1 backward step, 1 forward step, and finally 2 backward steps the sequence would be: 2, -1, 1, -2. The sequence may contain more steps than are needed to reach the destination, because some days Logan walks beyond the destination.

Inputs:

The first line of input will be the number of walks Logan will take, n , followed by one group of inputs for each walk. The first line in a grouping will contain one integer that is the number of forward steps between his starting point and his destination, d . The second line of input in the grouping will contain a sequence of integers that represents his forward and backward step sequence for the walk. All inputs on a line are separated by a space.

Outputs:

There will be one line output per walk that contains one integer that represents the exact time, in seconds, that it takes Logan to reach his destination for the first time.

Sample Inputs

```
2
5
3 -2 -1 4 -1 1 -1 1 1
8
-3 3 3 -2 4 -1 1 2 3 -3 1 1 1 2
```

Sample Outputs:

```
15
20
```