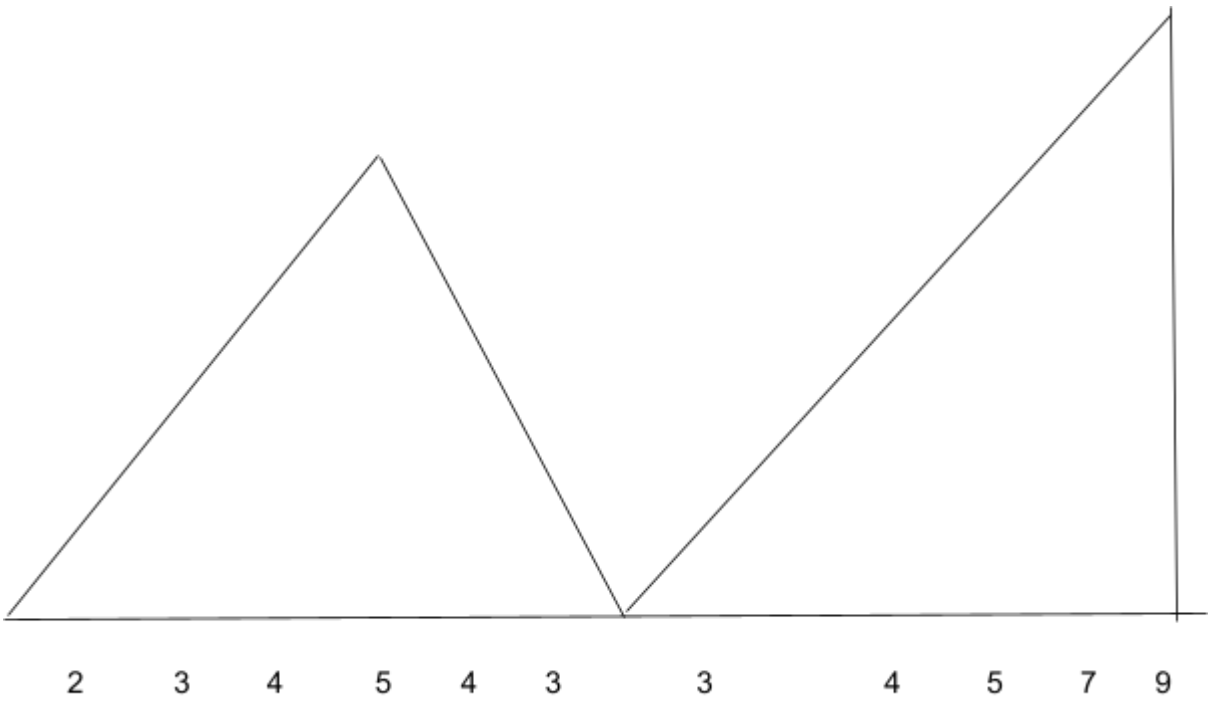
Triangle with widest base

A array create triangle if:

1. All the elements of array are either strictly increasing i.e. $a_{i-1} < a_i$
2. Or All the elements of array are either strictly decreasing i.e. $a_{i-1} > a_i$.
3. Or All the elements of array follows this sequence $a_{i-1} < a_i$ and $a_{i+1} < a_i$ where $1<=i<n$ (n is the length of array).



Problem:

Given an array, we have to return the length of the longest subarray that creates a triangle else return 0.

Input:

The first line contains one positive integer, indicating the N Length of array and . After first line, list of elements of array is given separated by “,” without any space

Output:

Length of maximum subarray that create triangle

Sample Input	Sample Output	explanation
7 0,1,2,3,2,1,0	7	Here, We have one triangle and the width of the triangle is 7. So, the widest triangle is of length 7.
10 0,1,2,3,2,1,0,4,7,6	7	Here, We have 2 triangles, one is [0, 1, 2, ,3 ,2,1,0] and another is [4,7,6]. So, the widest triangle is 7.
9 0,1,2,3,3,4,5,7,6	5	Here, We have 2 triangles, one is [0, 1, 2, 3] and another is [3,4,5,7,6]. So, the widest triangle is of length 5.
5 0,1,2,3,3	4	Here, We have one triangle [0,1,2,3] and the width of the triangle is 4. So, the widest triangle is of length 4.