**Longest Bitonic subsequence:-**

Given an array arr[0 … n-1] containing n positive integers, a [subsequence](http://en.wikipedia.org/wiki/Subsequence)of arr[] is called Bitonic if it is first increasing, then decreasing. Write a function that takes an array as argument and returns the length of the longest bitonic subsequence.  
A sequence, sorted in increasing order is considered Bitonic with the decreasing part as empty. Similarly, decreasing order sequence is considered Bitonic with the increasing part as empty.

**Examples:**

Input arr[] = {1, 11, 2, 10, 4, 5, 2, 1};

Output: 6 (A Longest Bitonic Subsequence of length 6 is 1, 2, 10, 4, 2, 1)

Input arr[] = {12, 11, 40, 5, 3, 1}

Output: 5 (A Longest Bitonic Subsequence of length 5 is 12, 11, 5, 3, 1)

Input arr[] = {80, 60, 30, 40, 20, 10}

Output: 5 (A Longest Bitonic Subsequence of length 5 is 80, 60, 30, 20, 10)