

Explaining the calculation for Monotonicity – Monotonicity is calculated as a weighted sum of elements in list

<-	Index	->	Explanation	Diagrammatic rep	E.g.	Monotonicity	Representation of weights
0	0	0	Decrease, decrease, decrease		4,3,2,1	Most monotonic	
0	0	1	Decrease, decrease, increase		3,2,1,4	Monotonicity broken by last element	
0	1	0	Decrease, increase, decrease		3,2,4,1	Least monotonic	
0	1	1	Decrease, increase, increase		4,1,2,3	Monotonicity broken by first element	
1	0	0	Increase, decrease, decrease		1,4,3,2	Monotonicity broken by first element	
1	0	1	Increase, decrease, increase		1,3,2,4	Least monotonic	
1	1	0	Increase, increase, decrease		2,3,4,1	Monotonicity broken by last element	
1	1	1	Increase, increase, increase		1,2,3,4	Most monotonic	

As you can see, breaks in the line are penalised.

The aim is to subtract the higher value, hence peaks are subtracted in one case whereas the value after a valley is subtracted in the other

(weight is the weight of the corresponding element in the sum)

