

DATA: (Dissimilarities)

	Obj. 1	Obj. 2	Obj. 3	Obj. 4	Obj. 5
Obj. 1	–	3	6	10	2
Obj. 2	3	--	4	5	8
Obj. 3	6	4	--	7	9
Obj. 4	10	5	7	--	1
Obj. 5	2	8	9	1	--

DATA SORTED INTO ASCENDING ORDER:

(Column, Row) indices <j,k>	(5,4)	(5,1)	(2,1)	(3,2)	(4,2)	(3,1)	(4,3)	(5,2)	(5,3)	(4,1)
DATA: delta (j,k)	1	2	3	4	5	6	7	8	9	10

(N.b. data values are chosen to be ascending whole numbers merely for simplicity of exposition)

MONOTONE REGRESSION: Calculation of Disparities & Stress

(Column, Row) indices <j,k>	(5,4)	(5,1)	(2,1)	(3,2)	(4,2)	(3,1)	(4,3)	(5,2)	(5,3)	(4,1)
DATA: delta (j,k)	1	2	3	4	5	6	7	8	9	10
CORRESPONDING DISTANCES IN CURRENT CONFIGURATION, d(j,k)	3	6	3	5	8	10	13	11	9	15
Monotone Regression disparities (calculations)	3									
		[4½	4½]							
				5	8	10				
							(11	11	11)	15
dhat(j,k)	3	4½	4½	5	8	10	11	11	11	15

SQUARED DIFFERENCES

diff.	d(j,k) - dhat(j,k)	0	3/2	-3/2	0	0	0	2	0	-2	0
sq. diff.	(d(j,k) - dhat(j,k))²	0	9/4	9/4	0	0	0	4	0	4	0
									Sum =	12.5	

STRESS VALUES:

Raw stress (dhat) = sum (d(j,k) - dhat(j,k))² = 12.5

Stress form I (dhat) = sqrt (Raw stress / NFI) = sqrt (12.5/839) = 0.2184 (NFI = sum (d(j,k)²)