The cost tables

- cost(i, j, h): the cost (total error) of the best way of segmenting sequence $a_i, \ldots, a_j$ using h segments
- Using a single segment: $c(i, j) =$ average of $a_i, \ldots, a_j$

$$\text{cost}(i, j, 1) = \sum_{l=1}^{j} (a_l - c(i, j))^2$$

(L_2 metric) or with $m(i, j) =$ median of $a_i, \ldots, a_j$

$$\text{cost}(i, j, 1) = \sum_{l=1}^{j} |a_l - m(i, j)|$$

(L_1 metric)

Using multiple segments

$$\mathsf{cost}(1, j, h) = \min_{l=i+1}^{j-1} \mathsf{cost}(1, l, h-1) + \mathsf{cost}(l+1, j, 1).$$

Example

- Data: 0 1 0 1 3 2 1 2
- L_1 metric

cost$(i, j, 1)$:

	0	1	0	1	3	2	1	2	
0									
1									
0									
1									
3									
2									
1									
2									

cost$(1, l, h)$:

	0	1	0	1	3	2	1	2	
1									
2									
3									
4									