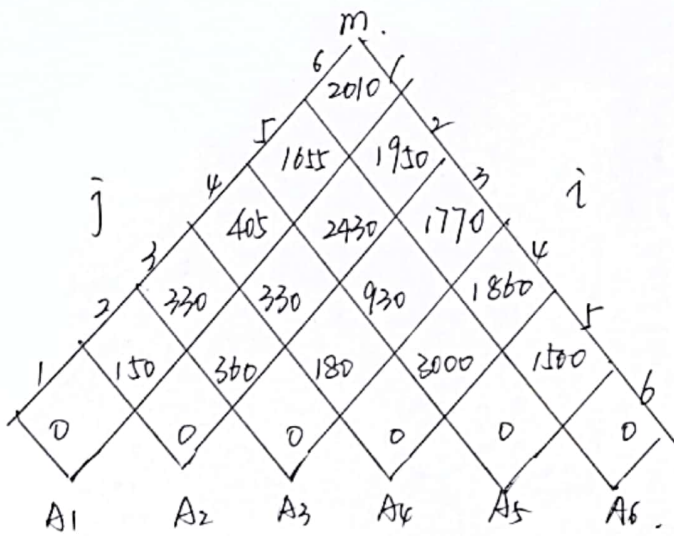
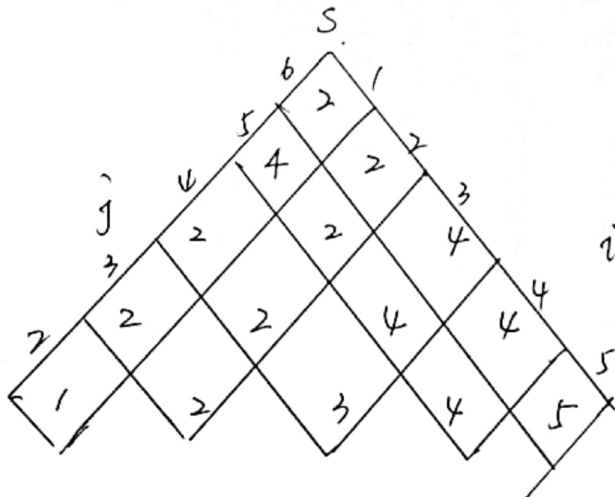


15.2-1



$$m[i,j] = \begin{cases} 0 & i=j \\ \min_{1 \leq k < j} \{ m[i,k] + m[k+1,j] + p_i p_{k+1} p_j \} & i < j \end{cases}$$



最小代价为2010. 最优括号化方案: $((A_1 A_2) ((A_3 A_4) (A_5 A_6)))$

15.4-1.

$X = \langle 1, 0, 0, 1, 0, 1, 0, 1 \rangle$ $m=8$.

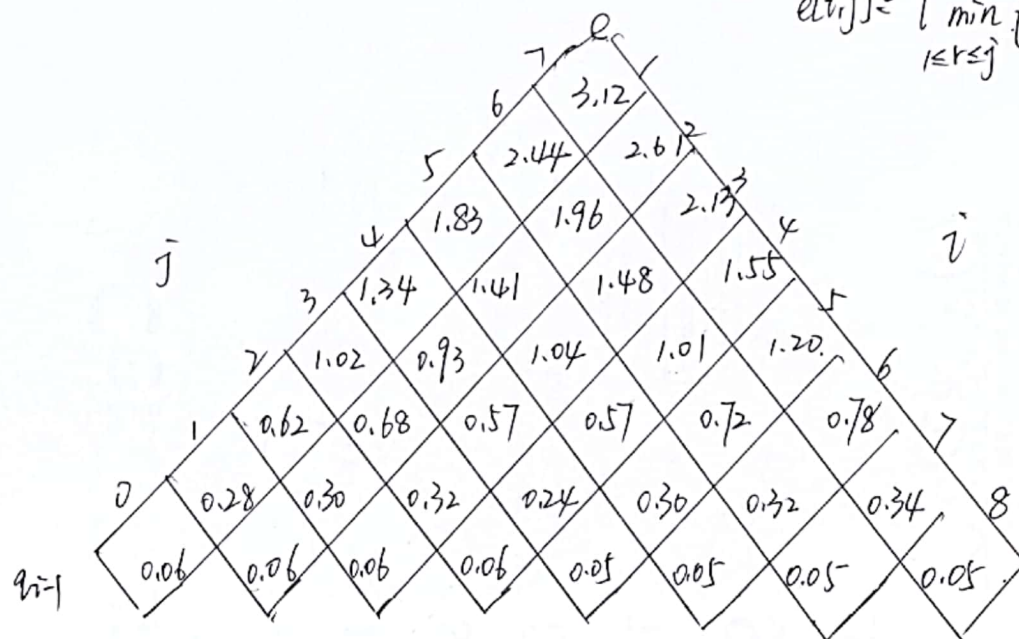
$Y = \langle 0, 1, 0, 1, 1, 0, 1, 1, 0 \rangle$ $n=9$.

		j	0	1	2	3	4	5	6	7	8	9
i	x_i	y_j	0	1	0	1	1	1	0	1	1	0
		x_i	0	0	0	0	0	0	0	0	0	0
1	1	0	↑0	↖1	←1	↑1	↑1	←1	↖1	↑1	←1	
2	0	0	↑1	↑1	↖2	↖2	↖2	↑2	←2	←2	↑2	
3	0	0	↑1	↑1	↑2	↑2	↑2	↖3	←3	←3	↑3	
4	1	0	↑1	↑2	↑2	↑3	↑3	↑3	↖4	↑4	←4	
5	0	0	↑1	↑2	↑3	↑3	↑3	↑4	↑4	↑4	↑5	
6	1	0	↑1	↑2	↑3	↑4	↑4	↑4	↑5	↑5	↑5	
7	0	0	↑1	↑2	↑3	↑4	↑4	↑5	↑5	↑5	↑6	
8	1	0	↑1	↑2	↑3	↑4	↑5	↑5	↑6	↑6	↑6	

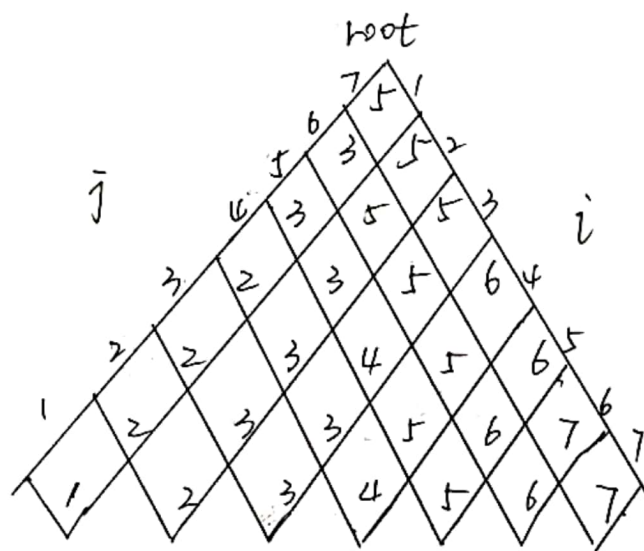
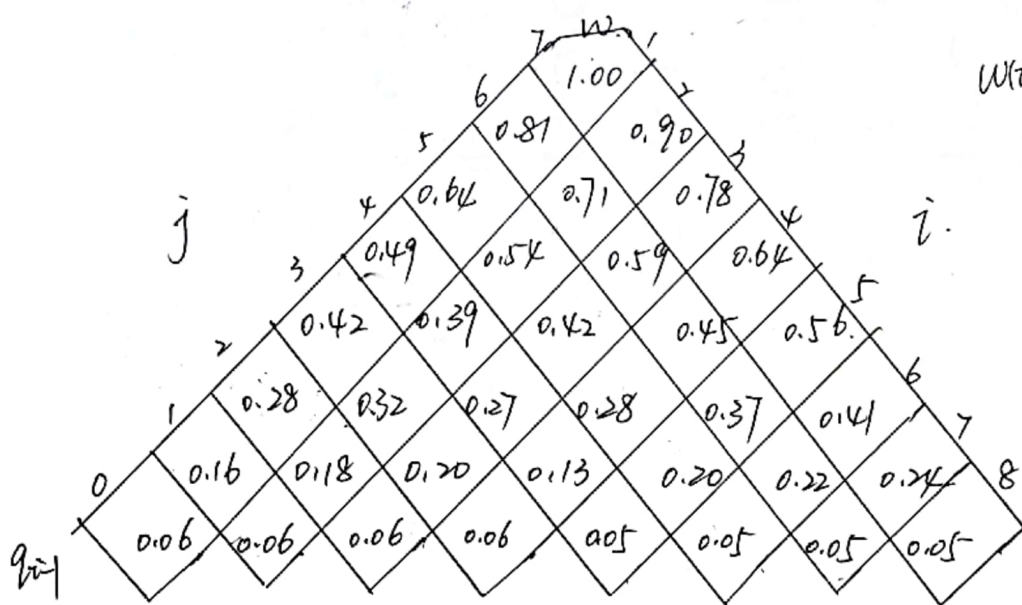
故 LCS 为 $\langle 1, 0, 0, 1, 1, 0 \rangle$.

15.5-2.

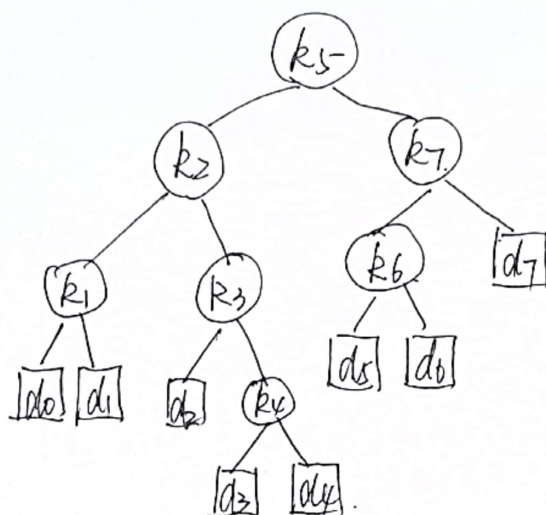
$$e[i,j] = \begin{cases} q_{i-1} & , j=i-1 \\ \min_{1 \leq r \leq j} \{ e[i,r-1] + e[r+1,j] \\ + w(i,j) \} & , i \leq j. \end{cases}$$



$$w(i,j) = e(i,r-1) + p_r + w(r+1,j).$$



结构:



代价为 3.12