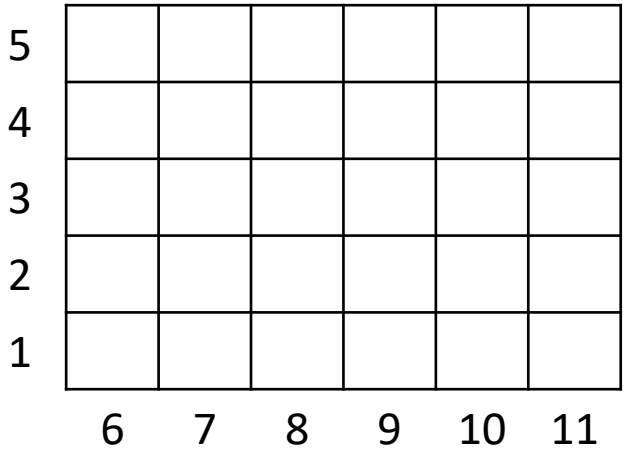
1. 采用动态规划技术求解RNA序列：AUGAUGGCCAU的最大碱基对数目。

A	U	G	A	U	G	G	C	C	A	U
1	2	3	4	5	6	7	8	9	10	11



RNA-Secondary-Structure $(n, b_1, b_2, \ldots, b_n)$

For $k = 5$ To $n - 1$

  For $i = 1$ To $n - k$

    $j \leftarrow i + k$.

    For each b_t $(i \leq t < j - 4)$ paired with b_j

      $T = 1 + M[i, t-1] + M[t+1, j-1]$.

      $M[i, j] \leftarrow \max\{M[i, j-1], T\}$.

Return $M[1, n]$.

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$i \leq t < j - 4$

	6	7	8	9	10	11
5	0	0	0	0		
4	0	0	0			
3	0	0				
2	0					
1						

	6	7	8	9	10	11
5	0	0	0	0	1	
4	0	0	0	0		
3	0	0	1			
2	0	0				
1	0					

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$$i \leq t < j - 4$$

5	0	0	0	0	1	1
4	0	0	0	0	1	
3	0	0	1	1		
2	0	0	1			
1	0	0				
	6	7	8	9	10	11

5	0	0	0	0	1	1
4	0	0	0	0	1	2
3	0	0	1	1	1	
2	0	0	1	1		
1	0	0	1			
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3	0	0	1	1	1	2
2	0	0	1	1	2	
1	0	0	1	1		
	6	7	8	9	10	11

5	0	0	0	0	1	1
4	0	0	0	0	1	2
3	0	0	1	1	1	2
2	0	0	1	1	2	2
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$i \leq t < j - 4$

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3	0	0	1	1	1	2
2	0	0	1	1	2	2
1	0	0	1	1	2	3
	6	7	8	9	10	11