## 算法 1 用归并排序求逆序数

```
输入: Array 数组, n 数组大小
输出: 逆序数
 1: function MergerSort(Array, left, right)
       result \leftarrow 0
       if left < right then
 3:
           middle \leftarrow (left + right)/2
 4:
           result \leftarrow result + MergerSort(Array, left, middle)
 5:
           result \leftarrow result + MergerSort(Array, middle, right)
 6:
           result \leftarrow result + Merger(Array, left, middle, right)
 7:
       end if
 8:
 9:
       return result
10: end function
11:
12: function MERGER(Array, left, middle, right)
13:
       i \leftarrow left
       j \leftarrow middle
14:
       k \leftarrow 0
15:
16:
       result \leftarrow 0
       while i < middle and j < right do
17:
           if Array[i] < Array[j] then
18:
19:
               B[k++] \leftarrow Array[i++]
           else
20:
               B[k++] \leftarrow Array[j++]
21:
               result \leftarrow result + (middle - i)
22:
23:
           end if
       end while
24:
        while i < middle do
25:
           B[k++] \leftarrow Array[i++]
26:
       end while
27:
       while j < right do
28:
           B[k++] \leftarrow Array[j++]
29:
       end while
30:
       for i = 0 \rightarrow k - 1 do
31:
           Array[left+i] \leftarrow B[i]
32:
       end for
33:
34:
       return result
35: end function
```