

素 A_1 到 A_7)。

我们看到, 在形成本例中的最大和子序列的三种方式中, 最好的方式是包含两部分的元素。于是, 答案为 11。图 2-7 提出了这种策略的一种实现手段。

```
1      /**
2      * Recursive maximum contiguous subsequence sum algorithm.
3      * Finds maximum sum in subarray spanning a[left..right].
4      * Does not attempt to maintain actual best sequence.
5      */
6      private static int maxSumRec( int [ ] a, int left, int right )
7      {
8          if( left == right ) // Base case
9              if( a[ left ] > 0 )
10                 return a[ left ];
11             else
12                 return 0;
13
14         int center = ( left + right ) / 2;
15         int maxLeftSum = maxSumRec( a, left, center );
16         int maxRightSum = maxSumRec( a, center + 1, right );
17
18         int maxLeftBorderSum = 0, leftBorderSum = 0;
19         for( int i = center; i >= left; i-- )
20         {
21             leftBorderSum += a[ i ];
22             if( leftBorderSum > maxLeftBorderSum )
23                 maxLeftBorderSum = leftBorderSum;
24         }
25
26         int maxRightBorderSum = 0, rightBorderSum = 0;
27         for( int i = center + 1; i <= right; i++ )
28         {
29             rightBorderSum += a[ i ];
30             if( rightBorderSum > maxRightBorderSum )
31                 maxRightBorderSum = rightBorderSum;
32         }
33
34         return max3( maxLeftSum, maxRightSum,
35                     maxLeftBorderSum + maxRightBorderSum );
36     }
37
38     /**
39     * Driver for divide-and-conquer maximum contiguous
40     * subsequence sum algorithm.
41     */
42     public static int maxSubSum3( int [ ] a )
43     {
44         return maxSumRec( a, 0, a.length - 1 );
45     }
```

图 2-7 算法 3