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作业-课后练习5

- 对下面的三组数据进行归并排序
  - (45, 36, 18, 53, 72, 30, 48, 93, 15, 36)
  - (1, 1, 1, 1, 1)
  - (5, 5, 8, 3, 4, 3, 2)
  - 给出每一次归并后的结果。

基于下图伪代码，则必然先完成左侧排序，后完成右侧排序，最后合并，因而有

```
if low<high then
    mid←⌊(low + high)/2⌋
    call MERGESORT(low, mid)
    call MERGESORT(mid+1, high)
    call MERGE(low, mid, high)
endif
```

- [45, 36, 18, 53, 72, 30, 48, 93, 15, 36]
  - [45 | 36 | 18 | 53 72 | 30 48 93 15 36]
  1. [36 45 | 18 | 53 72 | 30 48 93 15 36]
  2. [18 36 45 | 53 72 | 30 48 93 15 36]
  3. [18 36 45 | 53 72 | 30 48 93 15 36]
  4. [18 36 45 53 72 | 30 48 93 15 36]

- [18 36 45 53 72 | 30 | 48 | 93 | 15 36]

5. [18 36 45 53 72 | 30 48 | 93 | 15 36]
6. [18 36 45 53 72 | 30 48 93 | 15 36]
7. [18 36 45 53 72 | 30 48 93 | 15 36]
8. [18 36 45 53 72 | 15 30 36 48 93]
9. [15 18 30 36 36 45 48 72 93]

- [1,1, 1, 1, 1]
  - [1 |1 |1 |1 1]

1. [1 1 | 1 | 1 1]
2. [1 1 1 | 1 1]
   - [1 1 1 | 1 | 1]
3. [1 1 1 | 1 1]
4. [1 1 1 1 1]

- [5, 5, 8, 3, 4, 3, 2]
  - [5 | 5 | 8 3 | 4 3 2]

1. [5 5 | 8 3 | 4 3 2]
2. [5 5 | 3 8 | 4 3 2]
3. [3 5 5 8 | 4 | 3 | 2]
4. [3 5 5 8 | 3 4 | 2]
5. [3 5 5 8 | 2 3 4]
6. [2 3 3 4 5 5 8]