

Algorithms → Sorting algorithms → Merge sort

Merge sort → Find correct statements about top-down merge sort

Hard 4 minutes

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Given an array of ints.

```
1 | { 11, 7, 15, 8, 4, 4, 17, 9 };
```

Find all correct statements about sorting the array in the ascending order using the top-down merge sort implementation. Each time the algorithm recursively splits the array into two parts, until the part is equal to one.

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- ☒ It performs 14 recursive calls to separate array into 1-element subarrays.
- ☒ After merging { 7, 11 } and { 8, 15 } we get { 7, 8, 11, 15 }.
- ☐ The merge operation will always merge subarrays with different sizes.
- ☐ The required number of merge operations to merge all subarrays into a whole sorted array is 4.
- ☒ When it recursively divides the array into parts, each part has a power of 2 size.

Correct.

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