

Task 2:- array = [11, 9, 12, 7, 3]

Step 1:- [11, 9] [12, 7, 3] → [12] [7, 3]
[11] [9] [12] [7] [3]

Step 2:- Merge subarray.

[11] [9] → [9, 11]

[7] [3] → [3, 7]

[12] [3, 7] → [3, 7, 12]

[9, 11] [3, 7, 12]

Step 3:- Compare 9 and 11 with 3, 7, 12.

9 with 3 → pick 3

9	7	→	7
9	12	→	9

11	12	→	11
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last → 12

Merge sort: [3, 7, 9, 11, 12]

Quick sort:-

array = [11, 9, 12, 7, 3]

Step 1:- pivot [3]. → [] [3] [11, 9, 12, 7]

7 → [] [7] [11, 9, 12]

12 → [11, 9] [12]

9 → [9] [11]

Step 2:- Combine all sorted.

[3] [7] [9, 11] [12]

[3, 7, 9, 11, 12]