

A [54 26 93 17 77 31 44 55 20]

Merge-Sort

$p=1$

$r=9$

$q=5$

Merge-Sort (A, 1, 5)

$p=1$ $r=5$ $q=3$

Merge Sort (A, 1, 3)

$p=1$ $r=3$ $q=2$

Merge Sort (A, 1, 2)

$p=1$ $r=2$ $q=1$

Merge Sort (A, 1, 1)

$p=1$ $r=1$ $q=0$ (retorna)

Merge Sort (A, 2, 2)

$p=2$ $r=2$ $q=0$ (retorna)

MERGE (A, 1, 1, 2)

$p=1$ $q=1$ $r=2$

[26, 54]

Merge-Sort (A, 3, 3)

$p=3$ $q=3$ $r=3$ (retorna)

MERGE (A, 1, 2, 3)

$p=1$ $q=2$ $r=3$

[26, 54, 93]

Merge-Sort (A, 4, 5)

$p=4$ $q=4$ $r=5$

Merge-Sort (A, 4, 4)

$p=4$ $q=4$ $r=4$ (retorna)

Merge-Sort (A, 5, 5)

$p=5$ $q=5$ $r=5$ (retorna)

MERGE (A, 4, 4, 5)

$p=4$ $q=4$ $r=5$

[17, 77]

Merge (A, 1, 3, 5)
p = 1 q = 3 r = 5

[17, 26, 54, 77, 93]

Merge-Sort (A, 6, 9)
p = 6 q = 7 r = 9

Merge-Sort (A, 6, 7)
p = 6 q = 6 r = 7

Merge-Sort (A, 6, 6)
p = 6 q = 6 r = 6 (retorna)

Merge-Sort (A, 7, 7)
p = 7 q = 7 r = 7 (retorna)

MERGE (A, 6, 6, 7) [31, 44]
p = 6 q = 6 r = 7

Merge-Sort (A, 8, 9)
p = 8 q = 8 r = 9

Merge-Sort (A, 8, 8)
p = 8 q = 8 r = 8 (retorna)

Merge-Sort (A, 9, 9)
p = 9 q = 9 r = 9 (retorna)

MERGE (A, 8, 8, 9) [20, 55]
p = 8 q = 8 r = 9

MERGE (A, 6, 7, 9) [20, 31, 44, 55]
p = 6 q = 7 r = 9

MERGE (A, 1, 5, 9) [17, 20, 26, 31, 44, 54, 55, 77, 93]
p = 1 q = 5 r = 9