


seqnum = 4, 8, 2, 7, 5, 6, 9, 3

call mergesort(m)

m(1) L = 4, 8, 2, 7

R = 5, 6, 9, 3


L = call m(L) # L: 2, 4, 7, 8

R = call m(R) // not reach 

L = 4, 8

R = 2, 7

L = call m(L)

R = call m(R) 

L = 4

R = 8

L = call m(L)

R = call m(R)

length = 1, < 2, return 4

length = 1, < 2, return 8

L = 4

R = 8

m = [4, 8]

return m

L = 2

R = 7

call m(L)

call m(R)

return 2

L = 4, 8

R = 2, 7

return 7

$L = 2$

$R = 7$

$m = (2, 7)$

return (2, 7)

☆:

$L = 4, 8$

$R = 2, 7$

$m = (2, 4, 7, 8)$

return (2, 4, 7, 8)

△:

$L = 5, 6$

$R = 9, 3$

$L = \text{call } m(L)$

$R = \text{call } m(R)$

$L = 5$

$R = 6$

$L = \text{call } m(L)$ # $L = 5$

$R = \text{call } m(R)$ # $R = 6$

return 5

return 6

$L = 5$

$R = 6$

$m = (5, 6)$

return (5, 6)

$L = 9$

$R = 3$

$L = \text{call } m(L)$ # $L = 9$

$R = \text{call } m(R)$ # $L = 3$

return 9

return 3

$L = 9$

$L = 3$

$m = (3, 9)$

return (3, 9)

0:

$L = 5, 6$

$R = 2, 9$

$m = (3, 5, 6, 9)$

return (3, 5, 6, 9)

1:

$L = 2, 4, 7, 8$

$R = 3, 5, 6, 9$

$m = (2, 3, 5, 6, 7, 8, 9)$

return (2, 3, 5, 6, 7, 8, 9)