

Complexidade do Mergesort

```
MERGESORT( $A, p, r$ )  
1  se  $p < r$   
2      então  $q \leftarrow \lfloor (p + r)/2 \rfloor$   
3          MERGESORT( $A, p, q$ )  
4          MERGESORT( $A, q + 1, r$ )  
5          INTERCALA( $A, p, q, r$ )
```

linha	consumo de tempo
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1	$\Theta(1)$
2	$\Theta(1)$
3	$T(\lceil n/2 \rceil)$
4	$T(\lfloor n/2 \rfloor)$
5	$\Theta(n)$

$$T(n) = T(\lceil n/2 \rceil) + T(\lfloor n/2 \rfloor) + \Theta(n) + \Theta(2)$$