

## Tri fusion

function mergesort( $a[1 \dots n]$ )

Input: An array of numbers  $a[1 \dots n]$

Output: A sorted version of this array

if  $n > 1$ :

    return merge(mergesort( $a[1 \dots \lfloor n/2 \rfloor]$ ), mergesort( $a[\lfloor n/2 \rfloor + 1 \dots n]$ ))

else:

    return  $a$

function merge( $x[1 \dots k], y[1 \dots l]$ )

if  $k = 0$ : return  $y[1 \dots l]$

if  $l = 0$ : return  $x[1 \dots k]$

if  $x[1] \leq y[1]$ :

    return  $x[1] \circ \text{merge}(x[2 \dots k], y[1 \dots l])$

else:

    return  $y[1] \circ \text{merge}(x[1 \dots k], y[2 \dots l])$

