



merge ( )



$A_1 = \text{sort}(\text{Array 1})$

$A_2 = \text{sort}(\text{Array 2})$

$\text{merge}(A_1, A_2)$

$\left\{ \begin{array}{l} A_1 = \text{sort}(\dots) \\ A_2 = \text{sort}(\dots) \\ A_3 = \text{sort}(\dots) \\ A_4 = \text{sort}(\dots) \end{array} \right.$

recurrence

$$T(n) = 2T(n/2) + n$$

$$T(n) = 4T(n/4) + n$$

$$O(n \log n)$$

merge ( $A_1$ ,  $A_2$ ,  $A_3$ ,  $A_4$ )

AA    AB

AC  
final