



merge ()

A_1
 $=$
 sort (Array 1) \Rightarrow sort
 A_2 sort (Array 2)
 $\text{merge } (A_1, A_2)$

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

recurrence

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

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

$O(n \log n)$

merge (A_1, A_2, A_3, A_n)

