$A[1..2n]$ $O(n \log n)$

x, y con $x \leq y$ di $y - x$ è mod

$\log_3 2$

$x \cdot 2 = 3^x$

$2 = 3^{\log_3 2}$ $= \log_3 2$

no

$n = 1, 3, 6, 9, 12 \ldots$

$n = \alpha \times 3$

A

A_1 A_2 A_3

```
MERGESORT (A[1..n])
IF |A|=1 return A else
  A1 = MERGESORT (A[1..n/3])
  A2 = MERGESORT (A[floor(n/3)+1 .. 2(n/3)])
  A3 = MERGESORT (A[2(n/3)+1 .. n])
  B = MERGE (A1, A2)
  C = MERGE (B, A3);
  RETURN C;
```

$$T(n) = \begin{cases} c & \text{se } n = 1 \\ 3T(n/3) + 2n & \end{cases} \Rightarrow$$

$a = 3 \quad b = 3 \quad k = 1$

$a > b^k$

$O(n \log n)$