

$$i = 1, 2, \dots, m-1$$

$$|A[i+1] - A[i]| \leq 1$$

$$A[k] = 0 \leftarrow \text{zero}$$

A can $m \geq 2$ can $A[1] \leq 0$ e $A[m] > 0$ there always no zero.

CELEAZERO(A, i, k)

if $A[i] = 0$ return true;

$$x = (i+k)/2;$$

if $A[x] < 0$

return CELEAZERO(A, i, x);

else

return CELEAZERO(A, x+1, k);

$$T(m) = 2 + T(m/2) + \text{constant}$$

$$T(m) = T(m/2)$$

$$\underline{A[1] \leq 0, A[2] = 1, A[3] = 2, A[3] = 2, \dots}$$

CELEAZEROPIA(A, j, k)

if (j > k) return false;

if $A[j] == 1$ || $A[j+1] == 0$ return true;

$$x = (j+k)/2$$

CELEAZEROPIA(A, j, x);

CELEAZEROPIA(A, x+1, k);

$$3+2+8+4$$

$$12 = 6 + 15$$

$$3 \cdot 1 + 2 + 3 \cdot 3 + 4$$

$$3 + 2 + 8 + 4$$

$$5 = 16$$