$$\sum_{i=1}^{k} i = 1 + 2 + 3 + 4 + \dots + k$$

$$2\sum_{i=1}^{k} i = 1 + 2 + 3 + 4 \dots + (k-1) + k +$$
$$+ k + (k-1) + \dots + 2 + 1 =$$

$$(k+1) + (k+1) + \dots + (k+1) = \frac{k(k+1)}{2} = \sum_{i=1}^{k} i$$

$$T(n) = \begin{cases} O(1) & n \leq 1 \\ aT(n/c) + bn^k & \text{altrimenti} \end{cases}$$

$$T(n) = \begin{cases} O(n^k) & \text{se } a < c^k \\ O(n^k \log n) & \text{se } a = c^k \\ O(n^{\log_c a}) & \text{se } a > c^k \end{cases}$$