Örnek:

Bubble Sort

for $i=1$ to n $\longrightarrow c_1$

do for $j=n$ down to $i+1$ $\longrightarrow c_2$

do if $A[j] < A[j-1]$ $\longrightarrow c_3$

then exchange $A[j] \leftrightarrow A[j-1]$ $\rightarrow c_4$

$$\sum_{i=1}^{n} \sum_{j=n}^{i+1} (1) = \sum_{i=1}^{n} \left(\sum_{j=i+1}^{n} \right) = \underbrace{\sum_{i=1}^{n} (n-i-1+1)}_{n-i}$$

$$T(n) = c_1(n+1) + c_2 \sum_{i=1}^{n} (n-i+1) + c_3 \sum_{i=1}^{n} (n-i) + c_4 \sum_{i=1}^{n} (n-i)$$

$$T(n) = \underbrace{c_1(n+1) + c_2 \sum_{i=1}^{n} 1}_{} + \sum_{i=1}^{n} (n-i)(c_2 + c_3 + c_4)$$

$$= \Theta(n) + \sum_{i=1}^{n} n - \frac{n(n+1)}{2} = n^2 - \frac{n^2+n}{2}$$

$$= \Theta(n) + \frac{n^2}{2} - \frac{n}{2}$$

$$= \Theta(n^2) \text{ olur.}$$