

$$1+1 + \sum_{i=0}^{n-1} (1+2+1) + \sum_{j=i}^{n-1} (1+2+2+4)+1+1 = k_1 + k_2 \sum_{i=0}^{n-1} 1 + 9 \sum_{j=0}^{n-1} \sum_{i=j}^{n-1} 1 =$$

$$k_1 + k_2 \cdot n + 9 \sum_{i=0}^{n-1} (n-i) = k_1 + k_2 n + 9n \sum_{i=0}^{n-1} 1 - 9 \sum_{i=0}^{n-1} i = k_1 + k_2 n + 9n^2 - 9 \frac{n(n-1)}{2}$$

$$= k_1 + k_3 n + 9n^2 - 9 \frac{n^2}{2} = k_1 + k_3 n + \frac{13}{2} n^2 = T(n)$$

$$\Rightarrow T(n) \in O(n^2)$$

$$k_1 = 3$$

$$k_2 = 6$$

$$k_3 = k_2 + \frac{13}{2} = \frac{13}{2}$$

$$\Rightarrow T(n) = \frac{3}{2} n^2 + \frac{13}{2} n + 3$$

$$O_m \text{ ej if-sats: } 3n^2 + \frac{13}{2} n + 3$$