Taller

i → 4	j	k(j)	contador
1	2	1, 2	2
	3	1, 2, 3	3
	4	1, 2, 3, 4	4
	5	1, 2, 3, 4, 5	5
	3	1, 2, 3	3
	4	1, 2, 3, 4	4
	5	1, 2, 3, 4, 5	5
	4	1, 2, 3, 4	4
	5	1, 2, 3, 4, 5	5
	5	1, 2, 3, 4, 5	5
			40

Representación

$$T(n) = \sum_{i=1}^{n-1} \sum_{j=i+1}^{n} \sum_{k=1}^{j} 1$$

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

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

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

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

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

$$\sum_{i=1}^{n-1} i(i+1) = \frac{(n-1)n(n+1)}{3}$$

$$T(n) = (n-1) \cdot \frac{n(n+1)}{2} - \frac{1}{2} \frac{(n-1)n(n+1)}{3}$$

$$T(n) = \frac{(n-1)n(n+1)}{2} \left(1 - \frac{1}{3}\right)$$

$$T(n) = \frac{(n-1)n(n+1)}{2} \cdot \frac{2}{3} = \frac{(n-1)n(n+1)}{3}$$

$$T(n) = \frac{(n-1)n(n+1)}{3} = \frac{(5-1)(5)(5+1)}{3}$$

$$= \frac{(4)(5)(6)}{3}$$

$$= \frac{120}{3} = 40 //$$