Question [2 marks]
Count the number of assignments and comparisons in the following algorithm.

Algorithm Loop (n):

$s \leftarrow 0$
for $i \leftarrow 1$ **to** $2n$ **do**
  for $j \leftarrow 1$ **to** n **do**
    $s \leftarrow s + i$

$$T(n) = 3 + \sum_{i=1}^{2n} \left(4 + \sum_{j=1}^{n} 3 \right)$$

$$= 3 + \sum_{i=1}^{2n} (4 + 3n)$$

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

$$= 3 + 4(2n) + 3n(2n)$$

$$= 6n^2 + 8n + 3$$