1. (a) Outer loop run from 1 to n
Inner loop run from 1 to n.

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

$$T(n) = \sum_{i=1}^{n} n$$

$$T(n) = n \sum_{i=1}^{n} 1$$

$$T(n) = n \cdot n$$
$$T(n) = n^2$$

Runtime of algorithm is $O(n^2)$