Q1

i	j
1	n
2	n-1
3	n-2
1	1
⋮	⋮
n	1

$$S(n) = n + (n-1) + \cdots + 1$$

$$= \frac{n}{2}(n+1)$$

$$= \frac{n^2}{2} + \frac{n}{2}$$

$$= n^2$$

→ Time complexity $= O(n^2)$

Q.2

i	j
1	n
3	n
9	n.
27	n
81	n
243	n.
⋮	
1	

for eg → $n = 5$

→ $3^5 = 243$

→ $5 = \log_3 243$

→ for outer loop it is $\log n$

and for each outer loop inner loop runs n times

→ $O(n \log n)$.