**Question 1 Report**

b) f(n) = an

an = Θ(g(n)) where 0 <= c1\*g(n) <= f(n) <= c2\*g(n)

g(n) = n

Recurrence Equation = 2T(n/2) + 1

Cost in ith height = 2i \*n/2

Height =log2n

Cost of tree = i \* n/2i  = n

Total cost = n

**asymptotic running time complexity = Θ(n)**

c)

d)