Part 1

Graded Assignment 2

Q 1) Find the time complexity of the below functions in Θ form. Write NA if the function does not apply to any case.

Solution:

a) T (n) = 3T(n/2) + n

**Ans: - T(n) = Θ(nlog23)**

b) T (n) = 64T(n/8) − n2(log n) **Ans: - T(n) = Θ(n2log2n)**

c) T (n) = 2nT(n/2) + nn

**Ans: - Not possible to compute time complexity**

d) T (n) = 3T(n/3) + n/2

**Ans: - T(n) = Θ(nlogn)** e) T (n) = 7T(n/3) + n2

**Ans: - T(n) = Θ(n2)**