GRADED ASSIGNMENT 2

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**PART I**

*Question 1.*

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

1. T(n) = 3T(n/2) + n
2. T(n) = 64T(n/8)– n2(log n)
3. T(n) = 2nT(n/2)+ nn
4. T(n) = 3T(n/3) + n/2
5. T(n) = 7T(n/3) + n2

*Answer 1.*

1. T(n) = Θ(nlog3) using CASE 1
2. NA (DOES NOT APPLY) as f(n) is negative
3. NA (DOES NOT APPLY)
4. T(n) = Θ(nlog(n)) using CASE 2
5. T(n) = Θ(n2) using CASE 3