Course ID: CS 501
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Description:
http://npu85.npu.edu/~henry/npu/classes/algorithm/tutorialpoints_daa/slide/exercise_tutorialspoint.html
Q6 ==> Matrix Multiplication

6. Matrix Multiplication

- Please calculate T(N) for the following three approaches of matrices multiplication
  - Naïve Method
  - Divide and Conquer
  - Strassen's Method

Matrix 1							
4	5	7	6	2	3	8	1
1	2	6	7	5	4	8	3
4	2	6	1	5	3	8	7
5	4	8	2	3	1	7	6
1	2	3	5	7	6	8	4
2	8	5	1	4	6	3	7
8	2	6	3	4	5	1	7
2	6	7	8	1	3	5	4

Matrix 2							
6	1	5	4	7	2	3	8
4	2	7	8	1	5	3	6
3	1	7	5	2	6	8	4
3	8	7	1	5	6	4	2
4	1	6	8	7	5	3	2
3	1	8	4	2	6	5	7
8	1	4	5	3	6	7	2
4	1	8	5	6	3	2	7

1. **Naïve Method**

O(n) = 8^3 ;
T(n) = n^3.

2. **Divide and Conquer**

Mults: 8^3
Adds: 8^3/2
T(n) = 8^3 + 8^3/2;
O(n) = n^3.

3. Strassen's Method

T（n）= 7 T(n/2) + f(n^2);
T(n) = nlog7.