

Assignment 1

Problem 1:

Given a matrix of size $n \times n$. Write a program to calculate square of the input matrix using Strassen's matrix multiplication algorithm.

Input: First line denotes the value of t where t is number of test cases. In each test case, first line denotes the value of n , size of the matrix followed by a $n \times n$ matrix (n lines with n numbers in each line).

Output: Square of the input matrix need to be printed in each test case.

Constraints:

$$1 < t < 100$$

$$2 < n < 128 \text{ and } n \text{ will be only powers of } 2.$$

Sample Input:

```
1
3
1 1 1
1 1 1
1 1 1
```

Sample Output:

```
3 3 3
3 3 3
3 3 3
```