

COEN 45
Spring Quarter, 2010
Homework #3
Due Tues Apr 20

Problems from Chapter 3:

- #1, 4, 6
- #10 (enter format long in your script as suggested)
- #11, 14, 15, 18

Additional problem: given

$$A = \begin{bmatrix} 4 & 0 & 2 \\ 1 & -1 & 0 \\ 0 & 0 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 2 & 1 \\ 4 & -1 \\ 0 & 2 \end{bmatrix}$$

indicate (in handwriting) which of these operations can be performed and which cannot. (You need not actually do the calculations.) For those that can be performed, indicate the size of the resulting matrix. For those that cannot be performed, say why.

A+B
A*B
B*A
B'*A
A^2
B^2
B.^2

As before, please write and execute a script that solves all the problems (except the additional problem). Submit your script and your `hw3.out`, which you can open in the MATLAB edit window (pick “all files”) or your favorite text editor.

```
clear; close all
%
% COEN 45 HW #3, Joe Student
%
format compact
delete hw3.out
diary hw3.out
disp('Problem 1')
.....
disp('Problem 4')
.....
...
diary off
```