Problem Set #2

ECON 407: Mathematical Economics

(**due next class**)

1. Write the following linear equation system as a set of matrices .

2. We said in class that a linear equation system can generally be written as , where is the coefficient matrix, is the variable matrix, and is the constant matrix. Using the matrices you produced in question #1, verify that this is true. That is, recover the original three equation linear system in question #1 by multiplying and setting the resulting terms equal to (**show all steps for credit**).

3. Find the sum or difference of the following matrices.

a)

b)

4. An electronics store discounts all its items by 20% at the end of the year. If is the value of stock in its three branches prior to the discount, find the value after the discount, when

5. For each of the following, (i) determine if is defined; (ii) indicate what the dimensions of the product matrix will be; (iii) find the product matrix .

a)

b)

c)

d)