The lab is due by start of lab on November 7, 2012.

A usefull aspect of a spreadsheet is the ability to work with matrices. Adding, subtracting, and multiplying a matrix by a number are operations that are fairly standard in terms of formulas with cells. write the formula for the first element and then copy and paste.

The spread sheet also has the commands in the array category of the function wizard to work with matrices: **MINVERSE** and **MMULT**

Problem 1. Use these matrices to do the following computations.

$$A = \begin{bmatrix} 20 & 27 & -1 \\ -19 & -26 & 1 \\ 2 & 3 & 0 \end{bmatrix} \quad B = \begin{bmatrix} 10 & 5 & 0 \\ 1 & 6 & 9 \\ 2 & 9 & 5 \end{bmatrix} \quad C = \begin{bmatrix} 15 & 25 & -5 \\ -8 & 10 & 1 \\ 7 & 35 & -4 \end{bmatrix} \quad D = \begin{bmatrix} 2 & 8 & -1 \\ 5 & 2 & 10 \\ 3 & 10 & 7 \end{bmatrix}$$

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

Do the following computations. Be sure to clearly label your answers in the spreadsheet.

1. $2A + 3B - 6C =$

2. $3D - 4A + 2B =$

3. $AC =$

4. $BD =$

5. $ABC =$

6. $A^{-1} =$

7. $C^{-1} =$

8. $A^{-1} * B =$

9. $AB - DC =$

10. $F^{-1} * (A - B)$

11. $(A - B) * F^{-1}$

Once again e-mail me the spreadsheet showing how you solved these problems.