CSS 455 Winter 2012 C. Jackels
Activity No. 5 January 24, 2012
Names (must be present):

Part 1. **Solve this system of equations for x_1 and x_2 and keep track of how you do it**

$$\left.\begin{aligned} 2x_1 + 3x_2 &= 8 \ \text{(eqn 1)} \\ 5x_1 + 4x_2 &= 13 \ \text{(eqn 2)} \end{aligned}\right\} \textit{Example}$$

See reverse side

Part II

Given the matrices **M** and **A** below, calculate the product **MA,** showing that this operation scales and combines linearly the rows of **A**. If it is hard to follow with the numbers in place, write our the multiplication in terms of symbolic elements of **M** and **A**. In our example, the rows represented equations

$$\mathbf{M} = \begin{pmatrix} \frac{-4}{7} & \frac{3}{7} \\ \frac{5}{7} & \frac{-2}{7} \end{pmatrix}$$

$$\mathbf{A} = \begin{pmatrix} 2 & 3 \\ 5 & 4 \end{pmatrix}$$

Now calculate the product **AM** and determine what it does to the elements of **A**. Again, analyze the arithmetic in terms of the scaling and combining the rows and columns of **A.**

See reverse side