MATLAB: University of California, Davis

Computer LAB for Linear Algebra Dr. Daddel

MATH 22AL LAB # 6

Start Typing in MATLAB

14 Exercise 2

Enter the matrix A2= $\begin{bmatrix} 1 & 0 & 2 & 3 \\ 4 & -1 & 0 & 2 \\ 0 & -1 & -8 & -10 \end{bmatrix}$

a.) Use the method shown above to find a basis for the null-space of A2 (this may involve MATLAB and some pencil & paper. Then enter (type) your answer as column vectors:

type	$A2N1 =$ `your first vector in basis`
type	$A2N2 =$ `your second vector in basis`

b.) Check your work by calculating A*A2N1 and A*A2N2. You should get zero vector. to do this type:

type	$AN1 = A2 * A2N1$
type	$AN2 = A2 * A2N2$

c.) Check to see if any linear combination of $A2N1$ and $A2N2$ is in $null(A2)$. You could do this by typing (for example)

A2LC= A2* (3*A2N1 -2 *A2N2)

Try part **c.)** for two other numbers different from 3 and -2.