

**HOMEWORK 5**  
**DUE WEDNESDAY, 20 FEBRUARY 2008**

MATH 215 - LINEAR ALGEBRA - TOM LAGATTA

- Read pages 58-80 in the textbook (Sections 2.1 and 2.2).
- **Section 2.1:** 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40

- **MATLAB 1:**

- You can express the matrix

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{pmatrix}$$

in MATLAB by typing  $\mathbf{A} = [1 \ 2 \ 3; 4 \ 5 \ 6; 7 \ 8 \ 9]$ . Find the row reduced form of this matrix by typing `rref(A)`.

- Is the system

$$x + 2y = 3$$

$$4x + 5y = 6$$

$$7x + 8y = 9$$

consistent? If so, what are the solutions for  $x$  and  $y$ ?

- **MATLAB 2:** Check your work in MATLAB for §2.1, problems 33-40. Make sure you work through these problems by hand too!
- **MATLAB 3:** Section 2.2, problems 27, 33.
- **Section 2.2:** 1, 3, 5, 7, 9, 11, 13, 17, 23, 25, 26, 29, 30, 31, 39, 40, 41, 45, 46