MATH 2700 HOMEWORK 1
DUE:Thursday, Jan 24

READING ASSIGNMENT: Read Sections 1.1-1.3.
PROBLEMS FROM TEXTBOOK:
Section 1.1: 3, 7, 8, 12, 16, 20
Section 1.2: 2, 5, 8, 12, 19
Section 1.3: 6, 10, 11, 16, 22

ADDITIONAL PROBLEMS:

1) Let $A = \begin{bmatrix} 6 & 0 & 4 & 7 \\ 2 & 0 & 1 & 9 \\ 5 & 0 & 3 & 5 \end{bmatrix}$. Which of the following matrices is not row equivalent to A.

(a) $B = \begin{bmatrix} 12 & 0 & 8 & 14 \\ 2 & 0 & 1 & 9 \\ 1 & 0 & 1 & 2 \end{bmatrix}$ (b) $C = \begin{bmatrix} 6 & 0 & 4 & 7 \\ 0 & 0 & 1 & -20 \\ 2 & 1 & 3 & 0 \end{bmatrix}$,

(c) both of them are (d) none of them are.

2) A system of 5 linear equations and 7 variables could not have:

(a) 0 solutions.

(b) 1 solution.

(c) infinitely many solutions.

(d) More than one of these is possible.

(e) All of these are possible numbers of solutions.

Explain your answer.