Name:_____ Recitation Section:_____

Math 1553 Quiz 2, Fall 2018: Sections 2.2 and 2.3 (10 points, 10 minutes)

1. (6 points) Put the following matrix into reduced row echelon form (RREF). Show your work!

$$\begin{pmatrix} 0 & -1 & 3 & 4 \\ 1 & -2 & 0 & -2 \\ 3 & -4 & -5 & -10 \end{pmatrix}$$

2. (1 point each) In each case, determine whether the system of equations described by the augmented matrix has no solutions, exactly one solution, or infinitely many solutions. Circle your answer (no work necessary).

a) $\left(\begin{array}{ccc|c} 1 & 0 & 0 & 4 \\ 0 & 0 & 1 & 0 \end{array}\right)$

no solutions unique solution infinitely many solutions

b) $\left(\begin{array}{cc|c} 1 & 0 & 5 \\ 0 & 2 & -6 \\ 0 & 0 & 0 \end{array}\right)$

no solutions unique solution infinitely many solutions

c) $\left(\begin{array}{cccc|c} 1 & -1 & 0 & 3 & 3 \\ 0 & 1 & 1 & 4 & 6 \\ 0 & 0 & 1 & 0 & 4 \end{array}\right)$

no solutions unique solution infinitely many solutions

d) $\left(\begin{array}{cc|c} 1 & 4 & -1 \\ 0 & 0 & 1 \end{array}\right)$

no solutions unique solution infinitely many solutions