Section 7.1 – Introduction to Matrices   Name_____

The dimensions of a matrix are found by_____

What is the dimension of this matrix? $\begin{bmatrix} -3 & 13 & -1 & -7 \\ 1 & -5 & 2 & 0 \\ 5 & -20 & -2 & 5 \end{bmatrix}$ _____

Reduced Row Echelon Form _____

$\begin{bmatrix} 1 & -5 & 4 \\ 9 & 4 & 1 \\ 8 & -4 & 5 \end{bmatrix}$

interchange $R_1 \leftrightarrow R_2$

$3\,R_1 \to R_1$

$R_2 - R_3 \to R_3$

Solve for a, b, c, and d.

$$4\left(\begin{bmatrix} a & b-7 \\ 6 & 3d \end{bmatrix} + \begin{bmatrix} 5 & -8 \\ 2c+1 & a \end{bmatrix} \right) = \begin{bmatrix} 12 & -16 \\ 0 & 48 \end{bmatrix}$$

Manipulate the matrix to put it in Reduced Row Echelon Form. Show all steps and label them appropriately.

$$\begin{bmatrix} -3 & 13 & -1 & -7 \\ 1 & -5 & 2 & 0 \\ 5 & -20 & -2 & 5 \end{bmatrix}$$

From the following equations, make an augmented matrix, coefficient matrix and constant matrix

$$2x - 3y = 4$$

$$x + 2y - 3z = 0$$

$$4x - y + 2z = 3$$

augmented   coefficient   constant