1.1, 1.2 Handwrite Practice

Handwrite your responses to 1. and 2. below and collate them into a single PDF (a full size multipage PDF if you have more than one page) for submission into ASULearn.

1. Given the matrix $\begin{bmatrix} 3 & -2 & 4 & 0 \\ 9 & -6 & 12 & 0 \\ 6 & -4 & 8 & 0 \end{bmatrix}$

   a) Show the elementary row operations (like $r_2' = -5r_1 + r_2$) and the strict method of Gaussian elimination to put the matrix in row echelon form by-hand and provide the reduced matrix (stop at ref and don't scale the rows. Do use replacement!).

   b) Circle the pivots.

   c) Write out the solution(s), if any. If there are infinite solutions then write them in parametric form (like $x_3 = t$ for any variables without pivots and solve for variables with pivots in terms of the parameters)

   d) If there are solutions, then what is the geometry of the solution set (point, line, plane...)?

2. Determine all the value(s) of h so that the matrix $\begin{bmatrix} 1 & 4 & -2 \\ 3 & h & -6 \end{bmatrix}$ is the augmented matrix of a consistent linear system and show reasoning.