Name: _____
Student ID: _____

Quiz 1

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. §1.1 #TF *(3 marks)* Determine whether the statement is true or false, and justify your answer.
If each equation in a consistent linear system is multiplied through by a constant c, then all solutions to the new system can be obtained by multiplying solutions from the original system by c.

Question 2. §1.1 #11a *(1 mark)* Find a system of linear equations correcponding to the given augmented matrix.

$$\begin{bmatrix} 2 & 0 & 0 \\ 3 & -4 & 0 \\ 0 & 1 & 1 \end{bmatrix}$$

Question 3. §1.1 #14b *(2 marks)* Find the augmented matrix for the given system of linear equations

$$\begin{array}{rcrcrcl} 2x_1 & & & + & 2x_3 & = & 1 \\ 3x_1 & - & x_2 & + & 4x_3 & = & 7 \\ 6x_1 & + & x_2 & - & x_3 & = & 0 \end{array}$$

Question 4. §1.1 #8 *(2 marks)* Determine whether the given vector $(13,5,2)$ is a solution of the linear system

$$\begin{array}{rcrcrcl} 2x_1 & - & 4x_2 & - & x_3 & = & 1 \\ x_1 & - & 3x_2 & + & x_3 & = & 1 \\ 3x_1 & - & 5x_2 & - & 3x_3 & = & 1 \end{array}$$

Question 5. §1.1 #10b *(2 marks)* Find the solution set of the linear equation by using parameters as necessary

$$3v - 8w + 2x - y + 4z = 0$$