Name: _____
Student ID: _____

Quiz 2

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. §1.2 #3a *(3 marks)* Suppose that the augmented matrix for a system of linear equations has been reduced by row operations to the given row echelon form. Solve the system.

$$\begin{bmatrix} 1 & 0 & 8 & -5 & 6 \\ 0 & 1 & 4 & -9 & 3 \\ 0 & 0 & 1 & 1 & 2 \end{bmatrix}$$

Question 2. §1.2 #8 *(4 marks)* Solve the given linear system by Gauss-Jordan elimination.

$$\begin{array}{rcrcrcr} & - & 2b & + & 3c & = & 1 \\ 3a & + & 6b & - & 3c & = & -2 \\ 6a & + & 6b & + & 3c & = & 5 \end{array}$$

Question 3. §1.2 #TF *(3 marks)* Determine whether the statement is true or false, and justify your answer.
If a linear system has more unknowns than equations, then it must have infinitely many solutions.