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 #7 *(5 marks)* Solve the given linear system by Gauss-Jordan elimination.

$$
\begin{array}{rcrcrcrcr}
x & - & y & + & 2z & - & w & = & -1 \\
2x & + & y & - & 2z & - & 2w & = & -2 \\
-x & + & 2y & - & 4z & + & w & = & 1 \\
3x & & & & & - & 3w & = & -3
\end{array}
$$

Question 2. §1.2 #26 *(5 marks)* Determine the values of a for which the system has no solutions, exactly one solution, or infinitely many solutions.

$$
\begin{array}{rcrcrcl}
x & + & 2y & - & z & = & 2 \\
2x & - & 2y & + & 3z & = & 1 \\
x & + & 2y & - & (a^2 - 3)z & = & a
\end{array}
$$