

Q1

5 Points

Solve the following differential equation.

$$y'(t) = 6t^2 - 4t - 3, y(-1) = 1$$

Q2

5 Points

For the system below, perform each of the following tasks. Show your work.

1. Set up the augmented matrix for the system; then place the augmented matrix in row echelon form.
2. If the system is inconsistent, so state, and explain why. Otherwise, proceed to the next item.
3. Place the matrix in reduced row echelon form and find the solution to the system (in parametric form).

$$x + 2y + 3z = 1$$

$$3x + 2y + z = 1$$

$$7x + 2y - 3z = 1$$