

MATA33
QUIZ 2

Tutorial #:
Student #:

First Name:
Last Name:

Question 1 (10 points)

Construct a matrix $A=[A_{ij}]$ with size 4×3 such that $A_{ij}=2i-j$. Compute $A^T A$.

Question 2 (10 points)

Discuss the scenarios for the following system of equations to have no solution, unique solution, and infinitely many solutions.

$$\begin{cases} x + ay = 2 \\ 3x + 2y = b \end{cases}$$

Question 3 (10 points)

Using matrix reduction, solve the following equation set and express your solution in a parametric form.

$$x + 2y + 5z + 5w = -3$$

$$x + y + 3z + 4w = -1$$

$$x - y - z + 2w = 3$$