

GEORGIA TECH

SCHOOL OF MATHEMATICS

MATH 1502

CALCULUS II, SECTION K

Quiz # 8

October 27th 2010

First Name : -----

Last Name : -----

1. Solving a system of linear equations, find the second column of A^{-1}

where $A = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 0 & 1 \\ 0 & 1 & 1 \end{bmatrix}$

(Use this page for your calculations)

2. Give a one-to-one parametrization of the kernel of the matrix $A =$
- $$\begin{bmatrix} 1 & 1 & 0 \\ 1 & 0 & -1 \\ 0 & 1 & 1 \end{bmatrix}$$

3. Consider the system of linear equations

$$\begin{aligned}x - y + z &= -1 \\4x - y + z &= 0 \\2x + y + az &= b\end{aligned}$$

- (a) Give the **set** of values of a, b for which this system have a unique solution?
- (b) Give the **set** of values of a, b for which this system have no solution?
- (c) Give the **set** of values of a, b for which does this system have an infinite number of solution?

Unique solution $a, b =$

No solution $a, b =$

∞ solutions $a, b =$

(Use this page for your calculations)