

Quiz 1**1/23/2009****Name:** _____**Grade:** _____

1. Find all solutions of the linear system using elimination

$$\begin{cases} x + 2y + 3z = 1 \\ 3x + 2y + z = 1 \\ 7x + 2y - 3z = 1 \end{cases}$$

2. Find all solutions of the linear system $\begin{cases} x + 2y = a \\ 3x + 5y = b \end{cases}$, where a and b are arbitrary constants.

Quiz 2**1/30/2009****Name:** _____**Grade:** _____

Find the polynomial of degree 3 (of the form $f(t) = a + bt + ct^2 + dt^3$) whose graph goes through the points $(0,1)$, $(1,0)$, $(-1,0)$, and $(2, -15)$.

Quiz 3 [1.3]

2/6/2009

Name: _____

Grade: _____

UTA ID: _____

1. Compute the product $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix} \begin{bmatrix} 7 \\ 8 \end{bmatrix}$

2. Find a 3×3 matrix A such that $A \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix} = \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$, $A \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix} = \begin{bmatrix} 4 \\ 5 \\ 6 \end{bmatrix}$, and $A \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix} = \begin{bmatrix} 7 \\ 8 \\ 9 \end{bmatrix}$

Quiz 4 [2.3]**2/20/2009****Name:** _____**Grade:** _____**UTA ID:** _____Find the inverse of matrix A if it is invertible.

$$A = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 2 & 1 & 0 & 0 \\ 3 & 2 & 1 & 0 \\ 4 & 3 & 2 & 1 \end{bmatrix}$$

Quiz 5 [2.4]

2/27/2009

Name: _____

Grade: _____

UTA ID: _____

Compute the matrix product:

$$\begin{bmatrix} 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & k \end{bmatrix} \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}$$

Quiz 6 [3.1]**3/6/2009****Name:** _____**Grade:** _____**UTA ID:** _____

1. Find vectors that span $\ker(A)$. $A = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 1 & 2 & 3 \\ 0 & 0 & 0 & 1 \end{bmatrix}$

2. Give an example of a linear transformation whose kernel is the plane $x + 2y + 3z = 0$ in \mathbb{R}^3 .