

Quiz 4

Name: _____

Score: _____

1.

Linear functions	$m \times n$ Matrix	n vectors in \mathbb{R}^m
$f : \mathbb{R}^n \rightarrow \mathbb{R}^m$	_____	_____
one to one	_____	_____
onto	_____	_____
isomorphism	_____	_____

2. Find the determinant $\det A$ of the matrix A . Is A invertible?

$$A = \begin{bmatrix} 4 & 12 & 0 \\ -1 & -5 & -2 \\ 1 & 9 & 6 \end{bmatrix}$$

Determinant $\det A =$ _____

Invertible

Not Invertible

3. Find a basis for the column space and null space of the matrix A :

$$A = \begin{bmatrix} 4 & 12 & -8 & 4 \\ 1 & 3 & -3 & 1 \\ 3 & 9 & -5 & 4 \end{bmatrix}$$

Basis for $\text{Nul}A$: _____

Basis for $\text{Col}A$: _____