

Math 304 Section 1 Quiz 9

7/26/16

Name: _____

Let V be a subspace of \mathbb{R}^5 . Let $X = (\mathbf{v}_1, \mathbf{v}_2, \mathbf{v}_3)$ be a basis for V . Let K be the coordinate transformation of V with respect to the basis X .

1. What is the domain of K ?
2. What is the codomain of K ?
3. Is K a linear transformation? (Just answer yes or no).
4. Evaluate $K(\mathbf{v}_1 - 4\mathbf{v}_2)$.
5. Let \mathbf{u} be a vector in V . If the coordinate vector associated to \mathbf{u} is $\begin{bmatrix} 0 \\ 1 \\ 2 \end{bmatrix}$, write \mathbf{u} as a linear combination of vectors from X .

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