

Name: _____

Section: _____

Math 54 Lec 006 Quiz 4

Tuesday, July 3, 2018

Justify your assertions; include detailed explanation, and show your work. Closed book exam, no sheet of notes and no calculator. This quiz is worth 9 points total.

1. (3 points) Let

$$A = \begin{pmatrix} 1 & 6 & 2 & -4 \\ -3 & 2 & -2 & -8 \\ 4 & -1 & 3 & 9 \end{pmatrix}$$

Find a basis for the column space.

2. (3 points) Let $T : P_2[t] \rightarrow \mathbb{R}$ be the linear transformation defined by $T(p) = p(1)$. Find polynomials in $P_2[t]$ that span the kernel of T , and describe the image of T .

3. (3 points) True or False: Suppose H and K are subspaces of V , then $H \cup K$ is also a subspace of V .