

Math 3013 Linear Algebra, Spring 2011
Quiz 4
Apr. 7, 2011

1. Find the orthogonal decomposition of \mathbf{v} with respect to the subspace W .

$$\mathbf{v} = \begin{bmatrix} 2 \\ 1 \\ 5 \\ 3 \end{bmatrix}, \quad W = \text{span}\left\{ \begin{bmatrix} 1 \\ -1 \\ 1 \\ 0 \end{bmatrix}, \begin{bmatrix} 0 \\ 1 \\ 1 \\ 1 \end{bmatrix} \right\}$$