Worksheet
2/28/2020

Name: _____

1. In $\mathbb{R}^3$, consider point $A(1,2,3)$ and plane $(P) : x - y + z = 0$. Find the point on (P) that is closest to A.

see Lecture 22

2. In $M_{2\times2}(\mathbb{R})$, consider a subspace

$$V = \text{span}\left\{\begin{bmatrix} 1 & 1 \\ 0 & 1 \end{bmatrix}, \begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}, \begin{bmatrix} 1 & 0 \\ -1 & 1 \end{bmatrix}\right\}.$$

Find an orthogonal basis of V.

See Lecture 23