Quiz 7 Class 20

Linear Algebra I Section:

NAME & ID(Please print legibly) Week 8

PLEASE SHOW ALL YOUR WORK.

1. What matrix P projects every point in $\mathbb{R}^3$ onto the line of intersection of the planes $x + y + t = 0$ and $x - t = 0$?

2. Give a vector $\begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix}$ makes

$$\begin{bmatrix} 1 \\ 1 \\ 2 \end{bmatrix}, \begin{bmatrix} 5 \\ 11 \\ -8 \end{bmatrix}, \begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix}$$

an orthogonal basis for the vector space $\mathbb{R}^3$.