

國立虎尾科技大學九十七學年度第一學期平時考(三)試題

班級:四電二乙 科目:工程數學(二) 時間:2008/10/23(星期四) 12:10-13:10

1. Compute AB if AB is defined where $A = \begin{pmatrix} 3 \\ 0 \\ 1 \\ 4 \end{pmatrix}$ and $B = (3 \ -2 \ 7)$.

2. Find all invertible matrices S such that $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix} S = S \begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$.

3. Find the parametric equations for the line through the given points

$(1, 4, -9)$ and $(10, 14, -2)$.

4. Use Gaussian elimination to solve the given system $\begin{cases} x_1 + x_2 + x_3 = 3 \\ x_1 + 2x_2 + x_3 = 4 \end{cases}$.