

Homework 5

Linear Algebra, Dave Bayer, due March 25, 2014

Name: _____ Uni: _____

[1]	[2]	[3]	Total

If you need more than one page for a problem, clearly indicate on each page where to look next for your work.

[1] Find the determinant of the matrix

$$\begin{bmatrix} 1 & 1 & 1 & 1 \\ 1 & 2 & 2 & 2 \\ 1 & 2 & 4 & 4 \\ 1 & 2 & 4 & 7 \end{bmatrix}$$

[2] Find the determinant of the matrix

$$\begin{bmatrix} 1 & -1 & 0 & 0 & 0 \\ 1 & 1 & -1 & 0 & 0 \\ 0 & 1 & 1 & -1 & 0 \\ 0 & 0 & 1 & 1 & -1 \\ 0 & 0 & 0 & 1 & 1 \end{bmatrix}$$

[3] Find x/y where

$$\begin{bmatrix} e & 1 & 0 & 0 \\ 1 & e & 1 & 0 \\ 0 & 1 & e & 1 \\ 0 & 0 & 1 & e \end{bmatrix} \begin{bmatrix} w \\ x \\ y \\ z \end{bmatrix} = \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix}$$