Tutorial ...

Name:_____

ID:_____

Mathematics 1E2 2006–07

HW 7 Due 28/11/06

(1)(12 marks) Calculate the determinants of the following matrices by reducing to upper triangular form.

(a) $\begin{bmatrix} 2 & 4 \\ -3 & -4 \end{bmatrix}$ (b) $\begin{bmatrix} -2 & 6 & 6 \\ -3 & 9 & 10 \\ -1 & 5 & 3 \end{bmatrix}$

(2)(12 marks) Re-calculate these determinants using the criss-cross methods.

(3)(14 marks) Calculate the following determinant by reducing to upper triangular form.

$$\begin{vmatrix} 2 & 0 & 0 & 6 \\ -1 & -2 & 2 & -5 \\ 2 & -3 & 3 & 4 \\ 3 & 0 & -2 & 7 \end{vmatrix}$$

(4)(12 marks) Calculate the same determinant using cofactor expansion along the first row.