MA 260 Mini-test

(1) Find the determinant of $\begin{pmatrix} 1 & 0 & 3 & 125 \\ 1 & 0 & 2 & 75 \\ 17 & 10 & 37 & 117 \\ 2 & 0 & 1 & 175 \end{pmatrix}$

(2) Find the inverse of $\begin{pmatrix} 1 & 0 & 2 \\ 0 & 1 & 1 \\ -1 & 0 & 4 \end{pmatrix}$

(3) What is the area of a parallelogram P if 3 of its 4 vertices are $(b, a), (a, 3), (4, b)$?

(4) Use induction to prove that the determinant of an upper triangular matrix

$$A_{n\times n} = (a_{ij})$$

is equal to $\Pi_{i=1}^{n} a_{ii}$.