

Financial Mathematics

Determinants exist

0027-1. Write $\begin{bmatrix} 2 & 4 \\ 3 & 9 \end{bmatrix}$ as a product of elementary matrices.

0027-2. Find $\det \begin{bmatrix} 2 & 4 \\ 3 & 9 \end{bmatrix}$.

0027-3. Find the signed area of the oriented parallelogram $((2, 3) , (4, 9))$.

0027-4. Write $\begin{bmatrix} 2 & 4 & 0 \\ 3 & 9 & 0 \\ 0 & 0 & -2 \end{bmatrix}$ as a product of elementary matrices.

0027-5. Find $\det \begin{bmatrix} 2 & 4 & 0 \\ 3 & 9 & 0 \\ 0 & 0 & -2 \end{bmatrix}$.

0027-6. Find the signed volume of the oriented parallelepiped $((2, 3, 0) , (4, 9, 0) , (0, 0, -2))$.

0027-7. Write $\begin{bmatrix} 3 & 1 & 2 \\ 9 & 7 & 2 \\ 4 & 2 & 2 \end{bmatrix}$ as a product of elementary matrices, then a fully canonical matrix, then more elementary matrices.

0027-8. Find $\det \begin{bmatrix} 3 & 1 & 2 \\ 9 & 7 & 2 \\ 4 & 2 & 2 \end{bmatrix}$.

0027-9. Find the signed volume of the oriented parallelepiped $((3, 9, 4) , (1, 7, 2) , (2, 2, 2))$.