

Matemática Aplicada à Economia III

Lista 2 de Exercícios

Determinante e inversa de matrizes

1) Dadas as matrizes

$$A = \begin{bmatrix} 3 & 4 & 1 \\ -5 & 2 & 9 \\ 7 & 8 & 6 \end{bmatrix}, B = \begin{bmatrix} -4 & 1 & -1 \\ 3 & 2 & -3 \\ -1 & 5 & 1 \end{bmatrix}, C = \begin{bmatrix} -4 & 0 & -9 \\ 3 & 2 & 3 \\ -1 & 5 & 1 \end{bmatrix},$$

$$D = \begin{bmatrix} -3 & -1 & 1 & 2 \\ 3 & 3 & -1 & 2 \\ -1 & 1 & 1 & -2 \\ 5 & 6 & -1 & -2 \end{bmatrix}, E = \begin{bmatrix} 2 & 2 & 2 \\ 3 & 4 & 7 \\ 5 & 6 & 9 \end{bmatrix}, F = \begin{bmatrix} 1 & 3 \\ 2 & 7 \end{bmatrix}$$

$$G = \begin{bmatrix} -3 & 4 & -5 \\ 0 & 1 & 2 \\ 3 & -5 & 4 \end{bmatrix},$$

calcule:

(a) $\det A$

(b) $\det B$

(c) $\det D$

(d) $\det(A + C)$

(e) $\det A + \det C$

(f) $\det(B \cdot C)$

(g) $\det(B) \cdot \det(C)$

(h) a inversa de E

(i) F^{-1}

(j) G^{-1}

(k) D^{-1}