Calculus and Linear Algebra:
More on Systems of Linear Equations

Iñaki Rañó

Problem 1.1 *Obtain the inverse of the following matrices using Gauss-Jordan elimination.*

a)

$$A = \begin{bmatrix} 6 & -7 \\ -4 & 4 \end{bmatrix}$$

b)

$$A = \begin{bmatrix} 2 & 3 \\ -6 & -5 \end{bmatrix}$$

c)

$$A = \begin{bmatrix} 2 & -2 & -1 \\ 2 & -5 & 3 \\ 3 & -3 & 4 \end{bmatrix}$$

d)

$$A = \begin{bmatrix} -2 & -1 & -3 \\ 4 & 1 & 0 \\ 2 & 3 & 1 \end{bmatrix}$$

e)

$$A = \begin{bmatrix} -2 & 0 & 3 & 0 \\ 1 & 0 & -4 & 2 \\ 0 & 2 & -3 & 1 \\ 2 & 2 & 0 & -1 \end{bmatrix}$$

f)

$$A = \begin{bmatrix} -2 & -2 & 1 & 2 \\ 0 & -2 & -6 & 2 \\ -4 & -2 & 6 & 2 \\ 0 & -4 & -1 & 6 \end{bmatrix}$$