$\begin{cases} a^2 = a \\ a+b=1 \\ b^2=b \end{cases}$ $a^2-a=0$ $a(a-1)=0 \Rightarrow a=0$ o $a=1$

$a=0 \quad b=1$ $1^2=1$ SI

$a=1 \quad b=0$ $0^2=0$ SI

oct 25-13:09

Pas 73

(24) $A=\begin{pmatrix} 1 & 1/7 & 1/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

$A^2 = A \cdot A = \begin{pmatrix} 1 & 1/7 & 1/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}\begin{pmatrix} 1 & 1/7 & 1/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix} = \begin{pmatrix} 1 & 2/7 & 2/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

$A^3 = A^2 A = \begin{pmatrix} \quad \end{pmatrix}\begin{pmatrix} \quad \end{pmatrix} = \begin{pmatrix} 1 & 3/7 & 3/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

$A^4 = A^3 A = \begin{pmatrix} \quad \end{pmatrix}\begin{pmatrix} \quad \end{pmatrix} = \begin{pmatrix} 1 & 4/7 & 4/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

$$A^n = \begin{pmatrix} 1 & n/7 & n/7 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

oct 25-14:11

$B=\begin{pmatrix} 1 & 0 \\ 0 & 3 \end{pmatrix} = 3^1$

$B^2 = B \cdot B = \begin{pmatrix} 1 & 0 \\ 0 & 9 \end{pmatrix} = 3^2$

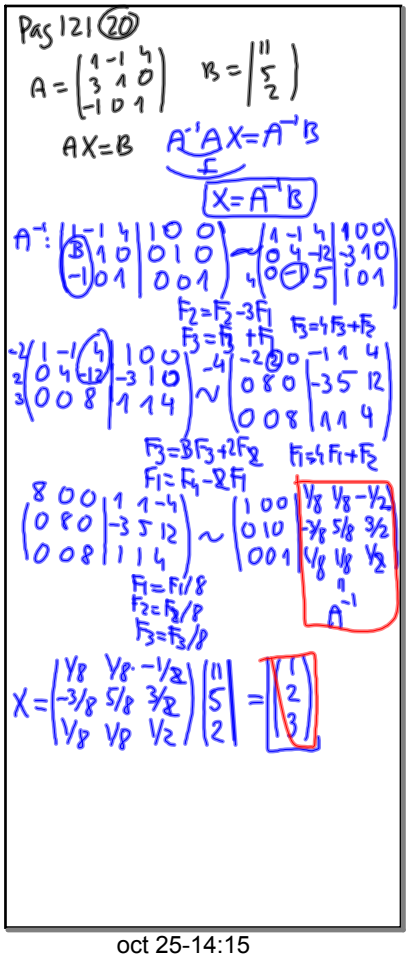
$B^3 = B^2 \cdot B = \begin{pmatrix} 1 & 0 \\ 0 & 27 \end{pmatrix} = 3^3$

$B^4 = B^3 \cdot B = \begin{pmatrix} 1 & 0 \\ 0 & 81 \end{pmatrix} = 3^4$

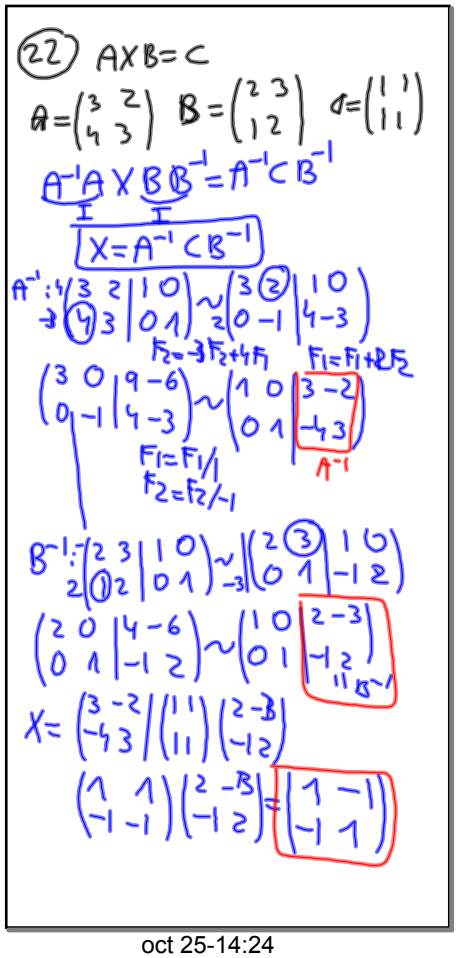
$$B^n = \begin{pmatrix} 1 & 0 \\ 0 & 3^n \end{pmatrix}$$

oct 25-14:14

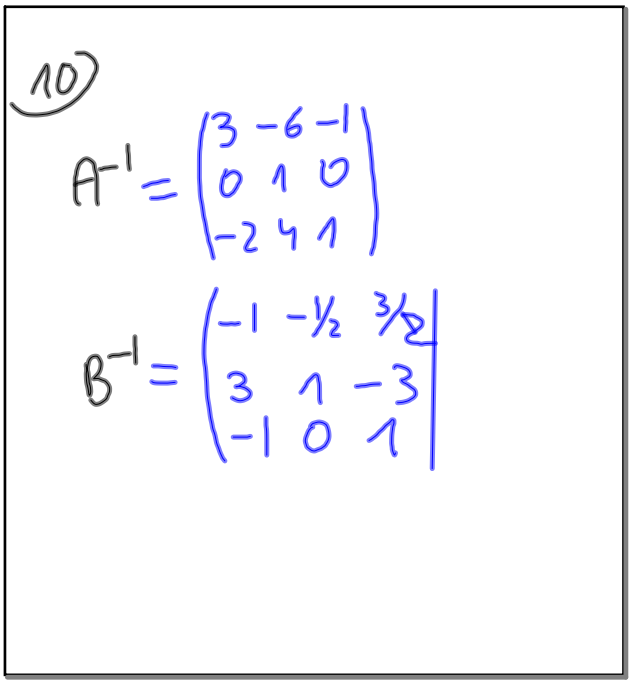
oct 25-14:15



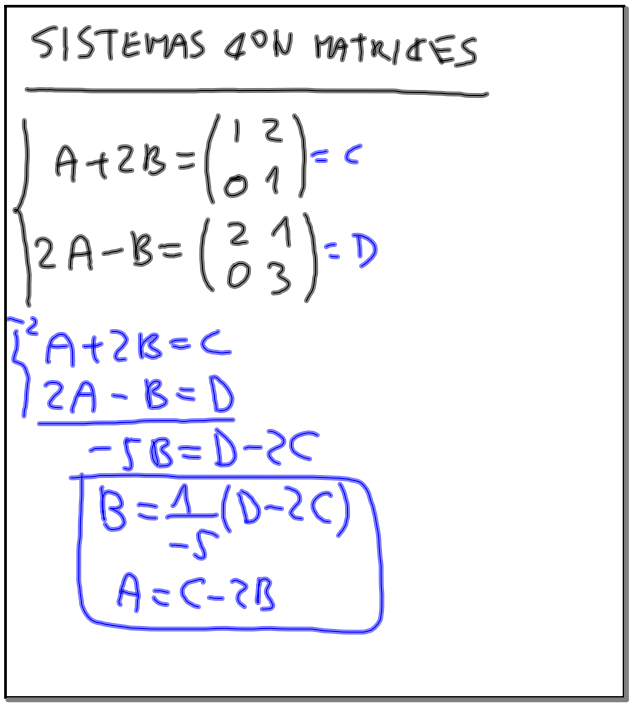
oct 25-14:15



oct 25-14:24



oct 25-14:29



oct 25-14:30

MATRICES QUE CONMUTAN CON UNA DADA

$A=\begin{pmatrix}1&2\\0&1\end{pmatrix}$ $AX=XA$

$\begin{pmatrix}1&2\\0&1\end{pmatrix}\begin{pmatrix}x&y\\z&t\end{pmatrix}=\begin{pmatrix}x&y\\z&t\end{pmatrix}\begin{pmatrix}1&2\\0&1\end{pmatrix}$

$\begin{pmatrix}x+2z&y+2t\\z&t\end{pmatrix}=\begin{pmatrix}x&2x+y\\z&2z+t\end{pmatrix}$

$\begin{cases}x+2z=x \to z=0\\ y+2t=2x+y \quad t=x\\ z=z\\ t=2z+t \to z=0\end{cases}$

$\begin{cases}z=0\\t=x\end{cases}$ $\begin{cases}x=\alpha\\y=\beta\\z=0\\t=\alpha\end{cases}$

$X=\begin{pmatrix}\alpha&\beta\\0&\alpha\end{pmatrix}$ $\forall \alpha,\beta\in\mathbb{R}$

$\begin{pmatrix}\alpha+1&\beta\\0&\alpha\end{pmatrix}$

oct 25-14:32

Deberes

pag 72-73

10 y 33

ÁNIMO CON EL ESTUDIO

oct 25-14:56