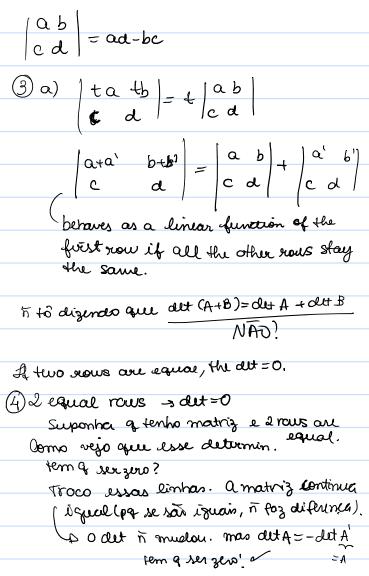
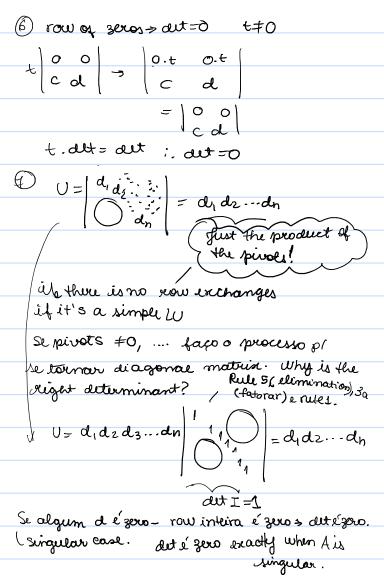
Properties of determinants agoia vamos nos concentrar em square mostices. · Determinants - det A Properties 1,2,3, 4-10 = signs Próximo bloco: Deterninante e ligenvalues determinante élimnimus associado a eada Squaru matrix. dut A= IA) the materia is invertible when det \$ 0. $\mathcal E$ singular quando det =0. alt i teste p/imertibilidade. determinant is a test for invertibility. (1) dut I = 1 (2) se inverto 2 filas da matriz A, dut A = -day, Exchange nows - reverts the signs of the 1 luen alterminants. _dut P=/ Plemutation matrix



2 equal rows matrix ish't invertible rank is less than <u>n</u>. 5- Quando ve subbrai exrau E from now K. the determinant doesn't change! all the steps of elimination don't change the determinant. en A Se faço eliminação, detA-det U. It just has the pivots on the diagonal. C-la d-lb = ad-alb-bc+alb=ad-be J Equivalea > Prop. 36 $\begin{vmatrix} a & b \\ c & d \end{vmatrix} + \begin{vmatrix} a & b \\ -la & -lb \end{vmatrix} = \begin{vmatrix} a & b \\ c & d \end{vmatrix} - \begin{vmatrix} a & b \\ a & b \end{vmatrix}$ linhas = det =0



Exe A To i singular (invertivel), det AFO.

Dimination:

ABU

Se a motriz é serigular, oque acontice?
(By elimination, I get a row of zeros.

dv=0

Se Til singular, I don 4 get gero.

alt A \$0 when A is invertible.

cap.2, it's invertible when elimination produces a full set of privats

intertible - U->D-od, dz-dn

lhecando:

$$\begin{vmatrix} a & b \\ c & d \end{vmatrix} \rightarrow \begin{vmatrix} a & b \\ o & d-bc \end{vmatrix} \rightarrow ad-bc$$

9 det $AA^{-1} = det A det A^{-1}$

$$\frac{1 = \text{out } A^{-1}}{\text{olet } A}$$

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$$\frac{1}{\text{out } A} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/3 \end{bmatrix}$$

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det 2A = 2^h det A

Senxn

Sdouble

all entries

of the

matrix

Quando det A é zero, A n é inversa.
det A⁻¹ - 1/det A > formula n
funciona mais

(10) alt A^T = det A $\begin{vmatrix} a b \\ c a \end{vmatrix} = \begin{vmatrix} a c \\ b a \end{vmatrix}$ ad-bc ad-bc
Se

uma linha dizeros se torna eduna dizeros gottransporto,

Setem coluna dizero, o det e zero.

Todas essas propriedades de rous

(\$ alterar rows, > alterar to reverte o
colinas essas

