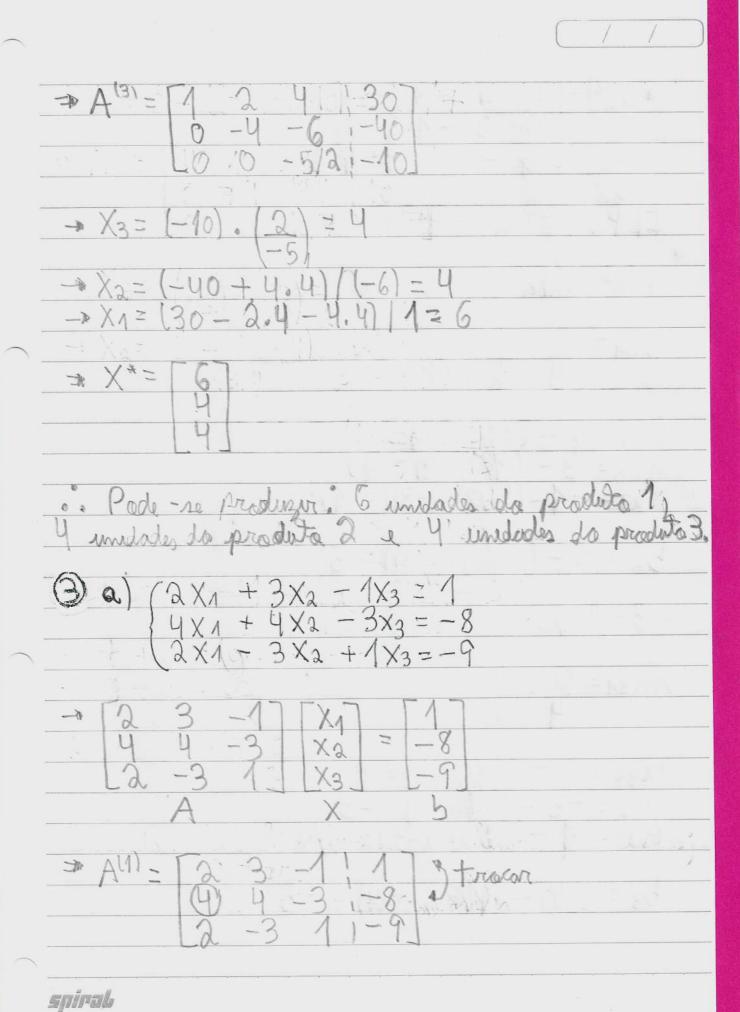
52= 20-(2.30)=-40 53= (-80) - (7/4 - (-40))= -10



7 AM=[4 4 -3 1-8]		11/2 4-
23-111	6	
- L2-3/1-9J		
E 10 2 10 2 0		
I) Pino = and = 4		754 :
000		
a 2ª linha		4 -
- 0	-	200
man = 2 - 1		80
7 4		
Cha1= 2- ((1/2),4)=0		
C122=3-(1/2),4)=1		
0123=-1-((1/2).(-3))=1/2		
ba=1-(1/2).(-81)=5		
	1,25,7	116 (-1
· 3ª linka	TAX	
1	- 15	
M31=2=1		
4 2		
Cl31=2-(1/2).4)=0		<u> </u>
0.30 = -3 - (1/12).41 = -5 $0.33 = 1 - (1/12).(-31) = 5/2$	<u></u>	
U33=1 - U1/2]. (-311= 5/2		
53= (-9)-(1/2).(-8)=-5		
J3 - (-11- \ (1/A). (01) - )		

 4.	3	0	07	[XI]		[-2]	
-1	3	-3	0	Xa	1	14	
.0	-3	1	-2	Xs		1-6	
_ 0	0	3	-2	LXu		1-4	14-5
	A		7	X	1	5	

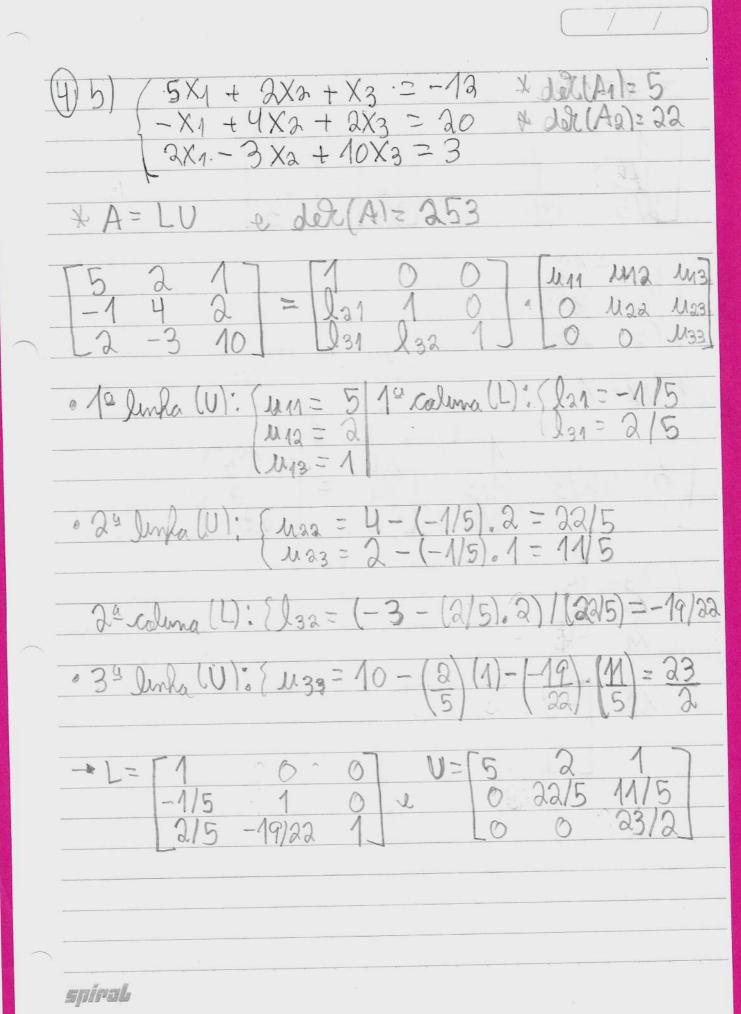
$$0.21 = -1 - ([-1/4].4) = 0$$
 $0.22 = 3 - [[-1/4].3] = 15/4$ 
 $0.23 = -3 - ([-1/4].0] = -3$ 
 $0.24 = 0 - [[-1/4].0] = 0$ 

$A^{(a)} = \begin{bmatrix} 1 & 3 & 0 & 6 & -2 \\ 0 & 15/9 & -3 & 0 & 27/2 \\ 0 & -3 & 1 & -2 & -6 \\ 0 & 0 & 3 & -2 & -4 \end{bmatrix}$	
II) Pund = and = 15/4	
o 3ª Junka	
$m_{32} = (-3)_{\circ}(4) = -4$ $(45) = 5$	
0.32 = -3 - ((-4/5), (45/4)) = 0 $0.33 = 4 - ((-4/5), (-3)) = -7/5$ $0.34 = -2 - ((-4/5), 0) = -2$	-1 /- %
b3=-6-(1-4/5).27/21=24/5	>
$A^{(3)} = \begin{bmatrix} 4 & 3 & 0 & 0 & 1-2 \\ 0 & 15/4 & -3 & 0 & 27/2 \\ 0 & 0 & -7/5 & -2 & 24/5 \end{bmatrix}$	1 trader

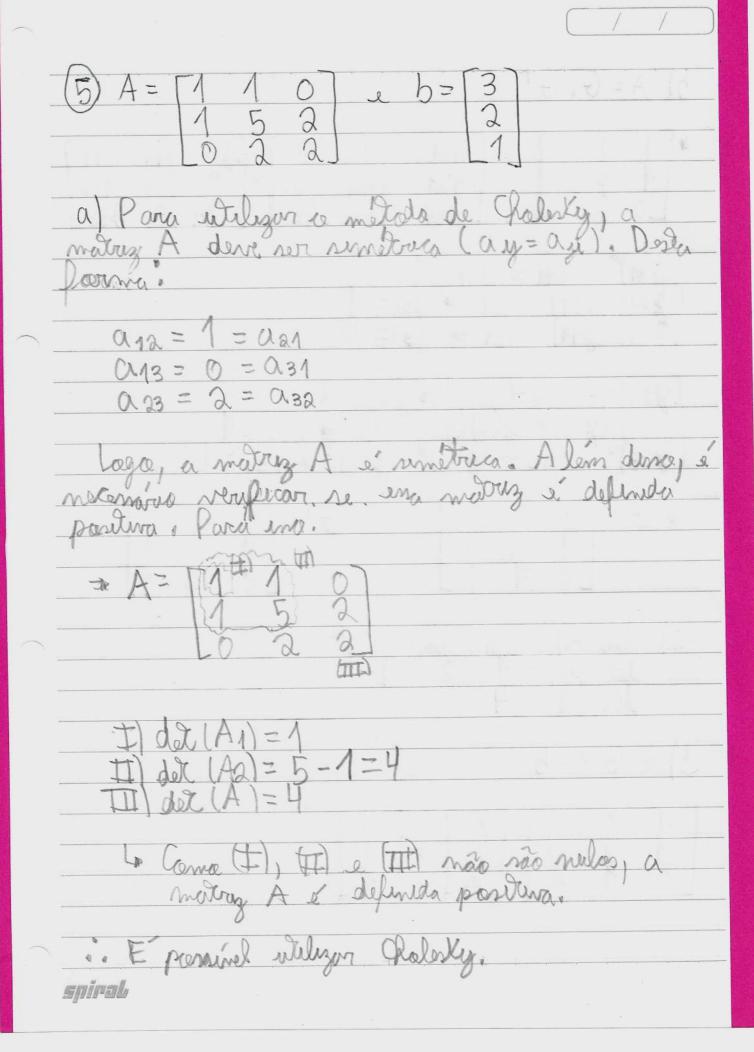
II) Pind = 0133 (3) = 3 · 4ª Janla

	(4) a) $(10 \times 1 + \times 2 - \times 3 = 10 \times 10 \times 10 \times 10 = 10)$ $(10 \times 1 + 10 \times 2 + \times 3 = 12 \times 10 \times 10 \times 10 = 10)$ $(2 \times 1 - \times 2 + 10 \times 3 = 11)$
	* A = LU e der (A) = 1023
`	101-1 100 has has 2 2 -1 10 1 2 1 3 1 2 1 0 0 1 1 3 3
	* 1ª Imha Wi ( Man = 10 1ª Caluna (L): ( lan = 1/10 Man = 1 ( lan = 2/10 )
	· 2ª Imla (U): [Maa = 10 - (1/10). 1 = 99/10 [Mas = 1 - (1/10). (-1) = 11/10
	2° columal): { l32 = (-1 - (2/10).1)/(99/10) = -4/33
	· 3ª Junha (V): [ 1133 = 10 - (2) (-1) - (-4). (11) = 31
	→ L= 1 0 0 0 2 U= 10 11  1/10 1 0 0 99/10 11/10  2/10 -4/33 0 0 0 31/3
	spiral sp

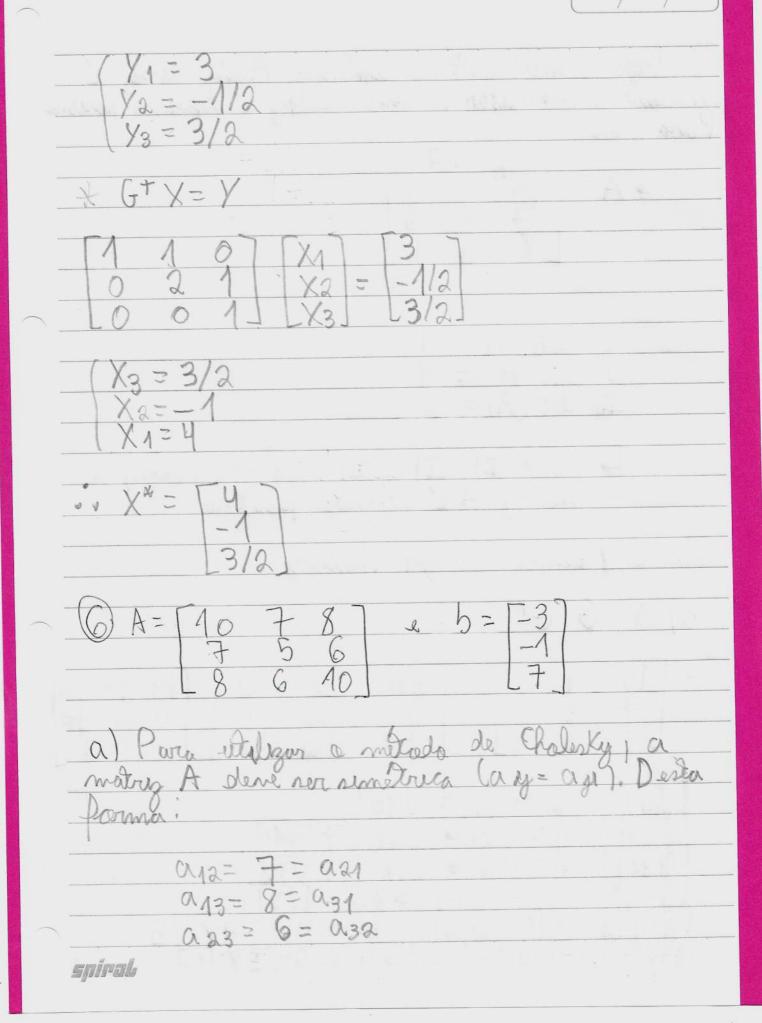
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$(7)_{1} = 10$ $(7)_{2} = 10$ $(7)_{3} = 31/3$ $(7)_{3} = 31/3$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$(x_3 = 1)$ $(x_3 = (11 - 11/10) / (99/10) = 1$ $(x_4 = 1)$ $(x_4 = 1)$ $(x_4 = 1)$
spira

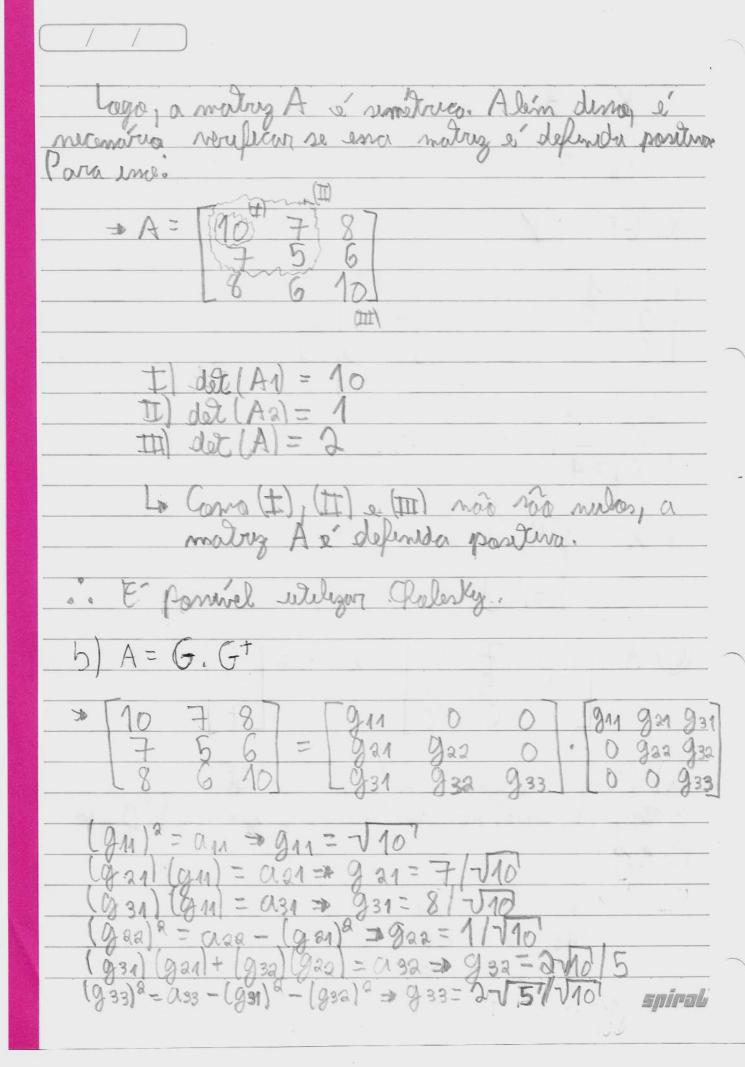


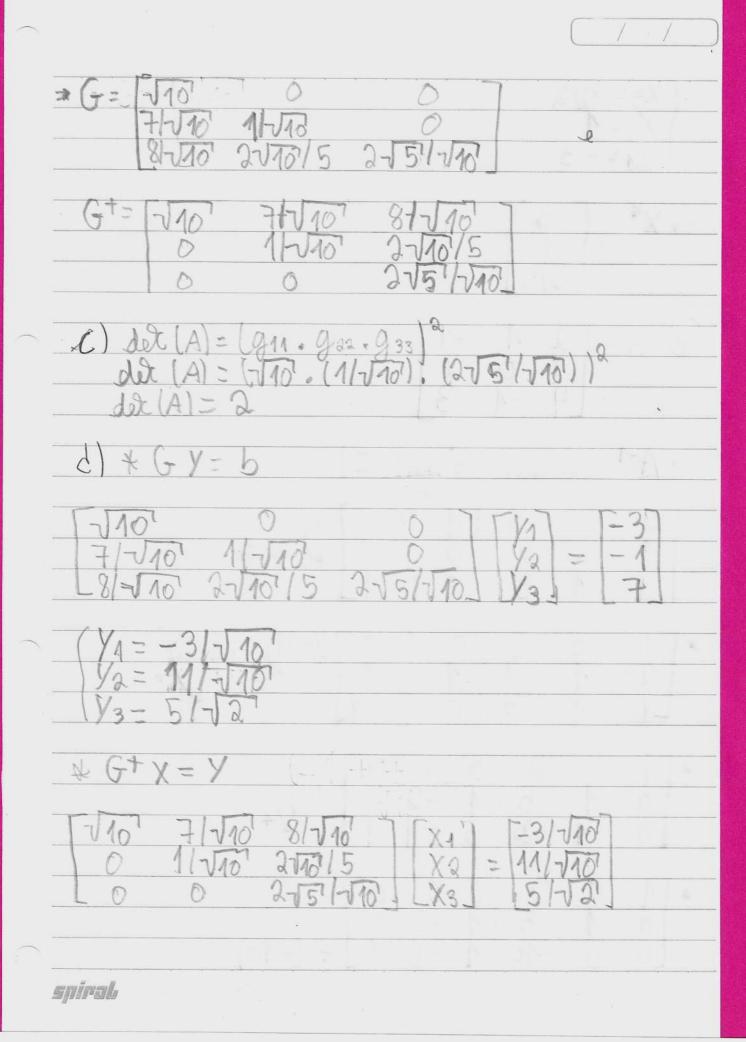
$+ Ly = b$ $ \begin{bmatrix} 1 & 0 & 0 &   & y_1 &   & -12 &   \\ -1/5 & 1 & 0 &   & y_2 &   & =   & 20 &   \end{bmatrix} $	e la la
[2/5 -19/22 1] [/3] [3] (V=-12	
$\frac{1}{1}$ $\frac{1}$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c} X_3 = 3 \\ X_4 = -4 \end{array}$	
$\begin{array}{c} x \times x = -4 \\ 3 \\ 3 \end{array}$	*-
	spiral

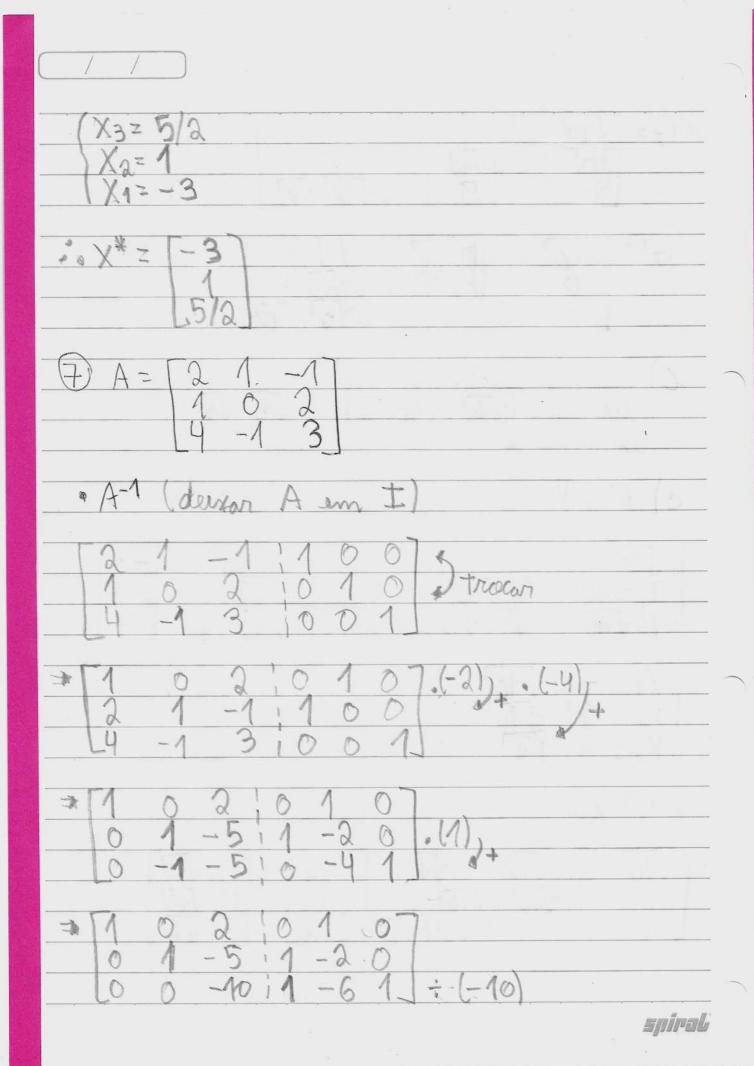


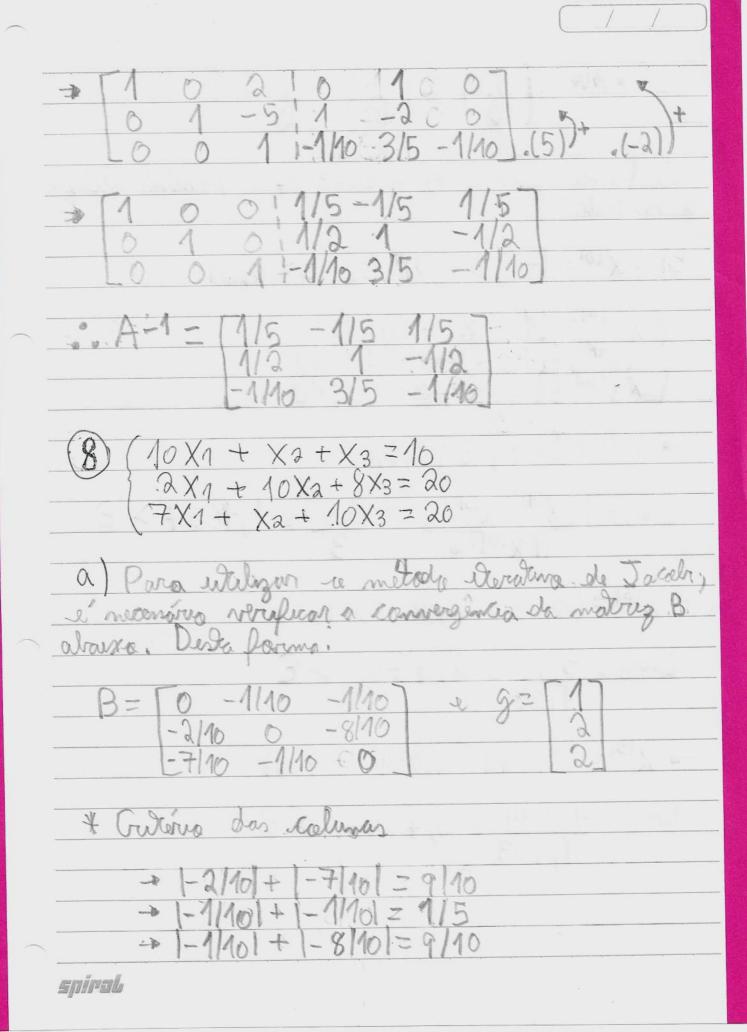
A= G. GT 911 0 0 0 911 911 911 911  $(g_{11})^{2} = 0_{11} \Rightarrow g_{11} = 1$   $(g_{21})(g_{11}) = 0_{21} \Rightarrow g_{21} = 1$   $(g_{31})(g_{11}) = 0_{31} \Rightarrow g_{31} = 0$  $(928)^2 = 0.22 - (921)^2 \Rightarrow 922 = 2$   $(931) (921) + (932) (922) = 032 \Rightarrow 932 = 1$   $(933)^2 = 0.33 - (931)^2 - (932)^2 \Rightarrow 933 = 1$ (A) = (91. 2.192)2 (A) = (1.2.192)

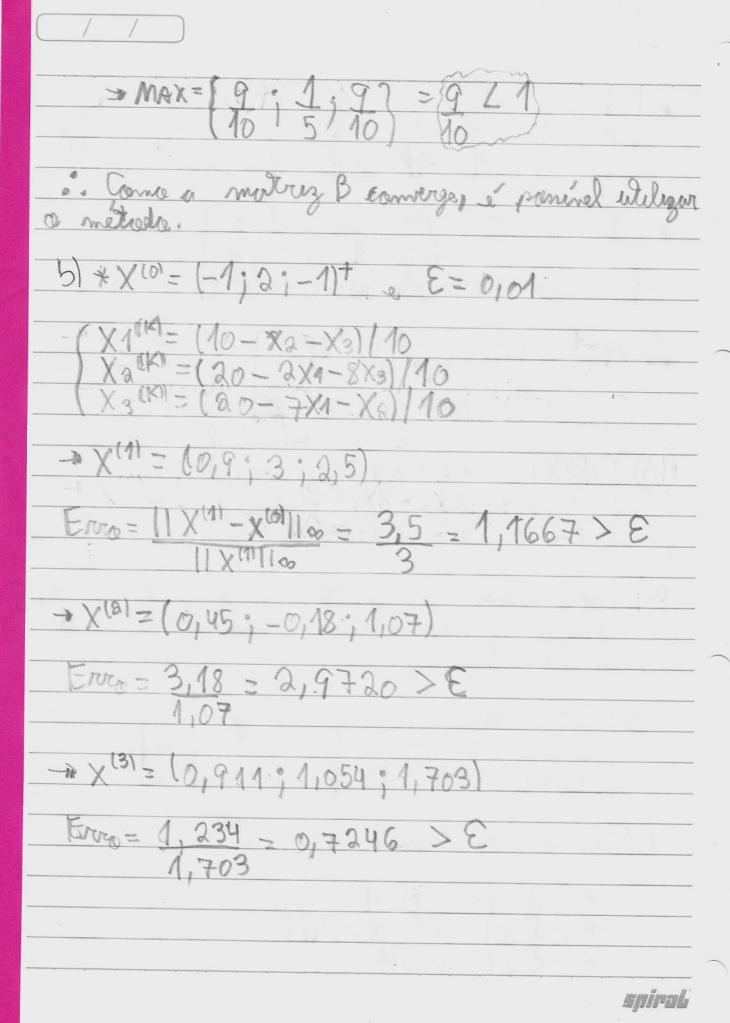












-> X(4) = (0,72 43; 0,4554 , 1,2569) Enro = 0,5986 = .0,4763 > E 1,2569 \* XL51= (0,8288;0,8496; 1,4475) Erro = 0,3942 - 0,2724 > E -> X (6) = (0,7703; 0,6763; 1,3349) Erra = 0,1733 - 0,1299 > E - X(7)= (0,7989;0,7780;1,3932 Erro= 0,1017 = 0,073 > E -> X(8) = (0,7829,0,7257,1,3630) Erro = 0,0523 - 0,0384 > E \* X(9) = (0,7941;0,7530;1,3794) Erry = 0,0274 = 0,0198 > E

- X(10) = (0,7868; 0,7382; 1,3709) Erro= 0,0148 = 0,0108 > E = X(11) = (0,7891; 0,7459; 1,3755) Enro = 0,0077 = (0,0056 LE) ·· X=[0,7891;0,7459;1,3755] 5 2 27 e b= [9] 1 6 3 | 10 2 2 7 | 11 a) Pela outero de Sasanfeld; -2 + -2 = 4 -20,8 => B2= 1-1 .4 + 1-1 = 17 = 0,5667 => B3= -2 . 4 + -2 . 17 = 41 = 0,3905 T 5 7 30 105 minute >B= MAX (0,8; 0,5667;0,39053=(0,8 ∠1) . Ha comorgênes. b) \* X(0)= (0,0,0) & E=0,01.  $X_{a}^{(k)} = (9 - 2x_{a} - 2x_{a})/5$   $X_{a}^{(k)} = (10 - x_{1} - 3x_{3})/6$   $X_{3}^{(k)} = (41 - 2x_{1} - 2x_{0})/7$  $= 10 \times 10^{-1} = 1.8 \times 10^{-1} = 1.8 \times 10^{-1} = 1.3667 \times 10^{-1} = 1.10 \times 1.8 = 1.13667 \times 10^{-1} = 1.10 \times 1.18 = 1.13667 \times 10^{-1} = 1.10 \times 1.18 = 1.13667 \times 10^{-1} = 1.10 \times 10^{-1} = 1.10$ Envio = 11x41 - x1011100 = 1,8 = 1 > E - X(a) = (0,9867; 1,1689; 0,9556) Erono = 0,8133 = 0,6958 > E -A X(3) = (0,9502; 4,0305; 1,0055) Ema = 0,1384 = 0,1343 > E 1,0305

\* X(4)= (0)9856; 0,9997; 1,0042) Erro= 0,0354 = 0,0352 > E => X(5)=(019985; 0,998Q; 1,0010) Erre 0,0129 = 0,0129 > E x(6)=(1,0004;0,9995;1,0001) Enro = 0,0019 = (0,0019 LE) : X = [1,0004; 0,19995; 1,0001]  $4x_1 + x_2 + x_3 + x_4 = 1$   $4x_1 - 8x_2 + x_3 - x_4 = -4$   $4x_1 + 2x_2 - 5x_3 + x_4 = 0$   $4x_1 + x_2 + x_3 - 4x_4 = 0$ e XLOI= (1, 1, 1, 1) + e E = 0,0001

Vereficando econvergência (critério des linhas): \* |-4|.3=3=0,75 # 1.1 + 1.1 + -1 = 1 = 0,5 # 1 02 + 2 = 0,8 \* 11.3 = 3 = 0,75 \* MAX = (0,75; 0,5; 0,8; 0,753 = (0,8 61) læge, pæde utilizar a metrodio. II) \*X(0) = (1,1,1,1) = E = 0,0001 (Xy(k) = (-X1-X2-X3)/6-4 = (X11) = 2 Xa(1) = (-4-2.2-1+1/(-8)=1  $X_3(1) = (-2 - 2.1 - 1)/(-5) = 1$ (Xy(1) = [-2-1-1) (L-4) = 1 Erra = 11 XM1- X101 1100 - 1 = 0,5 > E 11 XM11/20 spiral

x X(2) = (2. 1:1:1) Erro = 0 = (0 LE) " X=[2;1;1;1] b=1-3 x + a = (g+1) + 3 x + a = (a+b+g+1+2) - 1\* 1+g= 7(a+b+g+1+2) (-a/3)+b+0g+on+02=-1 0a + b + 0g - 1/2 + 0t = -3 a + 0b - g - 1 + t = 3 a + b + 9 - 1 - t = -2 -7a - 7b + 9g + 91 - 7t = 0egendo: a - alemão; 5 - Irraselevra; 3 - grego; 1 - Italiano; t - Tavila spiral

0.41 = 0 $0.42 = 2$ $0.43 = 1$ $0.44 = -1$ $0.45 = -1$	
54 = -5 • 54 linka	
$m_{51} = 21$ $a_{51} = 0$ $a_{52} = -28$ $a_{53} = 9$ $a_{54} = 9$	
0.55 = -7 $0.55 = -7$ $-1.2 = -1/2 = -1/2 = 0$	0 0 1-1
0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-1/2 0   -3 -1 1 0 -1 -1   -5 9 -7   21
II) Pund = aaa (a) = 1	

· 3ª Imla	
$m_{3a} = 3$	£ = 20
CL32 = 0 CL33 = -1	
0.39 = 1/2	
b <sub>3</sub> = 9	
· 4ª linda	
mya = 2	2011
C142 = 0	The state of the s
0.43 = 1 $0.44 = 0$	
0.45 = -1	
- L	
by = 1	
· 5ª linka	Sand City
$m_{52} = -28$	
0152 = 0	
0153 = 9	
$\alpha_{54} = -5$	

Ass = -7	-				
bs = -63					
$A^{(3)} = [-1/3]$	1 0 0 0	0 0 0 0	0 -1/2 1/2 0 -5	0 1 -1 -7	1-1 1-3 1-63
III) Perrò = agg (3)	= _ /	1		16 -	
o 4º Imla					
m43 = -1					
0.43 = 0 $0.44 = 1/2$ $0.45 = 0$					
by = 10					
a 5ª Impla					1.j
$m_{53} = -9$					
$a_{53} = 0$ $a_{54} = -1/2$ $a_{55} = 2$					A)
$b_5 = 18$				4	spiral

$\Rightarrow A^{(4)} = -1/3  1  0$ $0  1  0$ $0  0  -1$ $0  0  0$	0 0 1 - 1 -1/2 0 1 - 3 1/2 1 9 0 1/2 0 10 0 1/2 2 18
II) Però = ayq (4) = 1/2	
* 5ª linka	
mgy = -1	
0154 = 0 0155 = 2	
bs = 28	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0 0 0 -1 0 -1/2 0 -3 -1 1/2 1 9 0 1/3 0 10 0 0 2 28
$ \begin{array}{c} +                                    $	membros de eada matiemphilade da companhea et: 24 alemates 7 brasileiros, 15 gregos, 20 italianos e 14 turios.