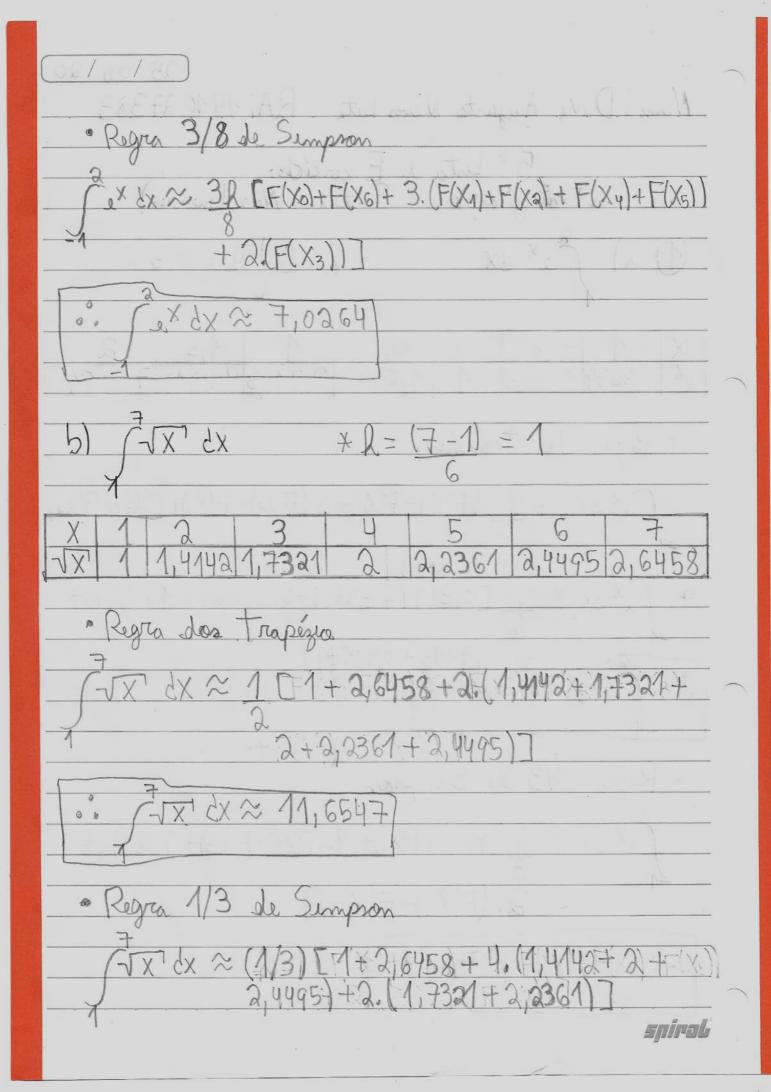
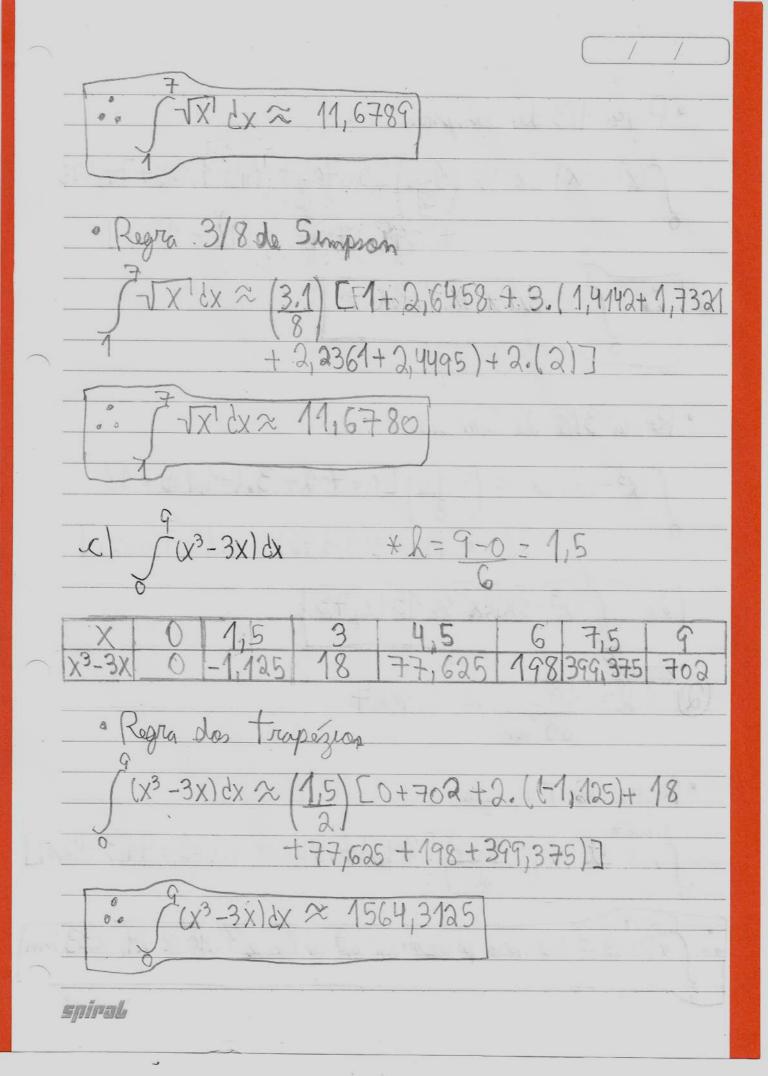
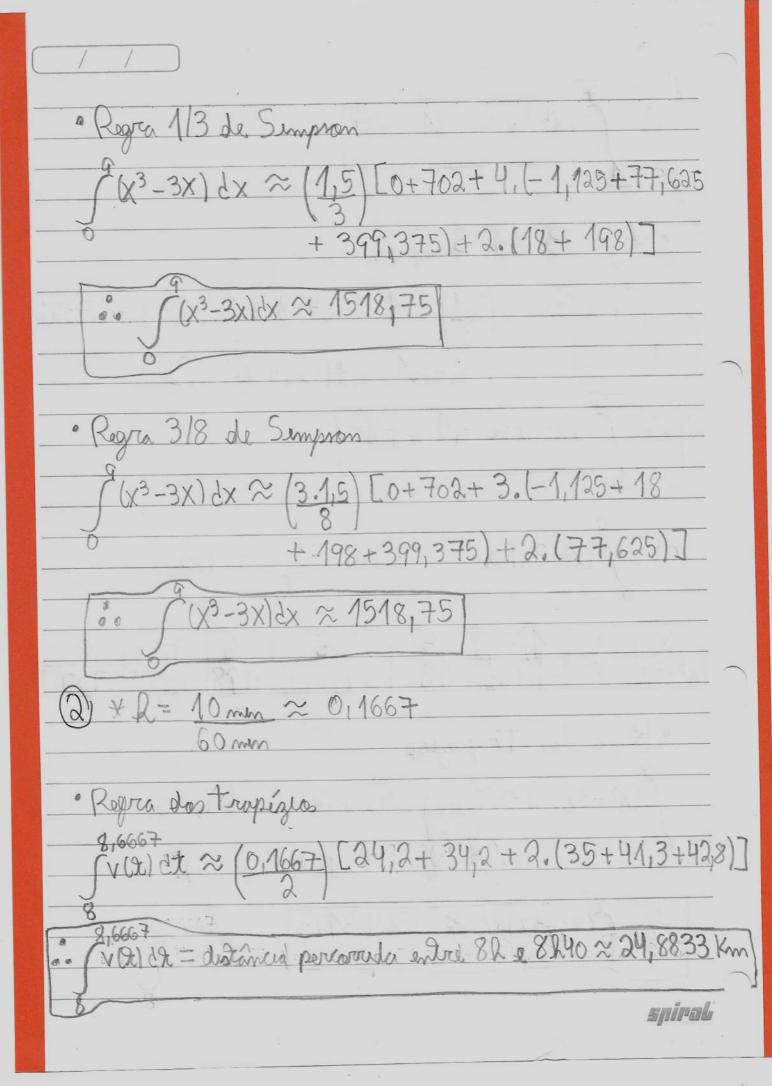
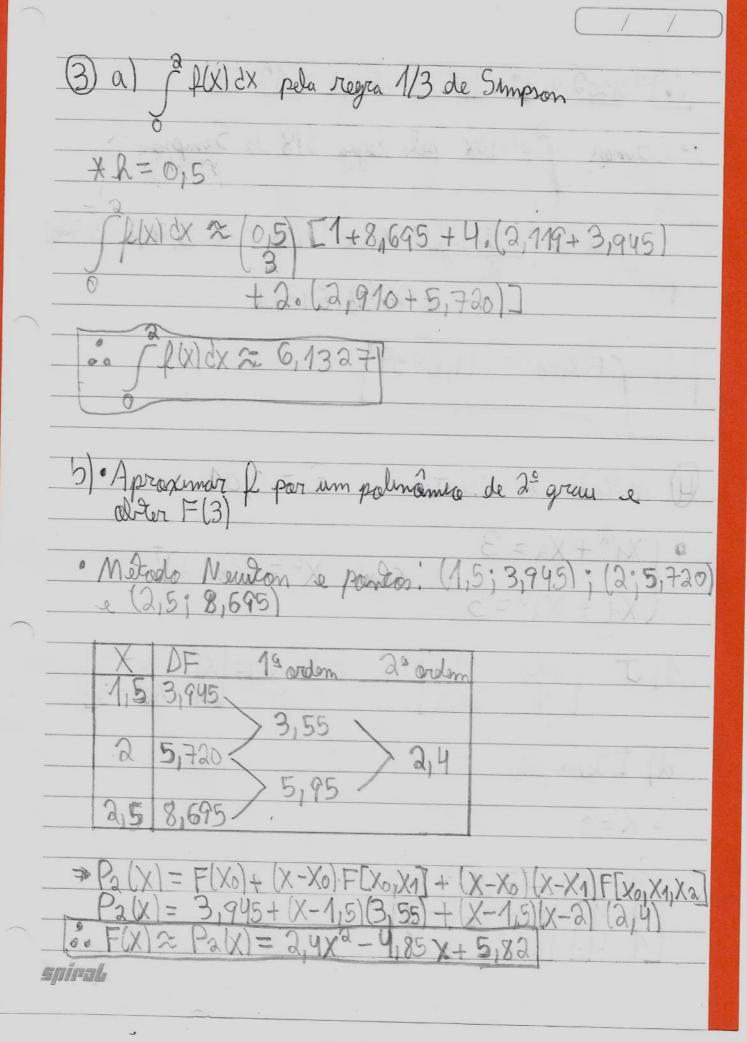
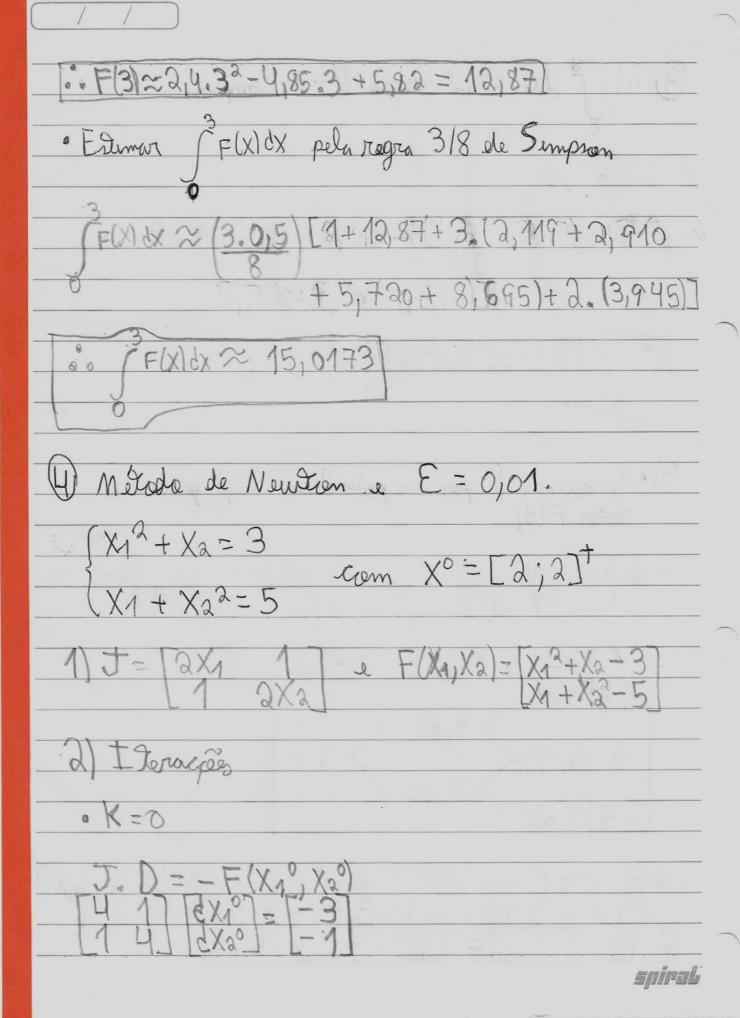
25/08/20 Nome: Dave Augusto Neves Lete RA: 1910 27383 5º Lista de Exercicios (Integração e Sistemas Não Lineares) $ya) \int_{a}^{a} x dx \qquad + k = (a+1) = 0,5$ -1 -0,5 0 0,5 1 1,5 2 0,3679 0,6065 1 1,6487 2,7183 4,4817 7,38 91 Regra dos trapízios F(X6)+2. (F(X1)+F(X2)+F(X3)+F(X4) [x dx ≈ 0,5 [0,3679+7,3891+2.(0,6065+1+1,6487 + 2,7183+4;4817) Tex dx = 7,1669 Regra 1/3 de Simprono 2× 2× = 2 [F(xo) + F(xo) + 4. (F(xn) + F(x3) + F(x5)) + 2. (F(Xa)+F(Xy))] * Cxxx ~ 7,0235 spiral











⇒
$$dX_1^\circ = -0.7333$$

⇒ $dX_2^\circ = -0.0667$
Ly $X_1^1 = X_1^\circ + dX_1^\circ = 2 - 0.7333 = 1.2667$
Ly $X_2^1 = X_2^\circ + dX_2^\circ = 2 - 0.0667 = 1.9333$
Enrow: MAX { 1.2667 = 21; 1.49333 - 21} - 0.3793 > 8
MAX { 1.2667 ; 1.9333 | 2
- |Z = 1 | 3.8666 | dX_2^{-1} | $dX_1^\circ = -0.5378$ | $dX_2^\circ = -0.2359$
⇒ $dX_2^\circ = -0.2359$
Ly $X_1^\circ = -0.2359$
Ly $X_2^\circ = 1.9333 + 0.0599 = 1.9732$
Enrow: MAX { 1.0308 ; 1.19932 | 3
• |Z = 2
- 2.0616 | 1 | $dX_2^\circ = -0.0557$
- 2 | 2 | 3.9864 | $dX_2^\circ = -0.0557$

spiral

$\Rightarrow dx_{3}^{2} = -0.0303$
Erra: MAX [-0,0303]; 0,0067] = 0,0152 > E MAX [1,0005]; 11,9999]
• K=3
$ \begin{bmatrix} 2,001 & 1 \\ 1 & 3,9998 \end{bmatrix} \begin{bmatrix} 2x^3 \\ 2x^3 \end{bmatrix} = \begin{bmatrix} -0,0009 \end{bmatrix} $
$\Rightarrow dx^3 = -0.0005$ $\Rightarrow dx^3 = 0.0001$
$\frac{1.5 \times 1.4}{1.0005} = 1$ $\frac{1.5 \times 1.4}{1.0005} = 1$ $\frac{1.5 \times 1.4}{1.0005} = 1$
Erico: MAX [-0,0005]; [0,0001]] = (0,0003 LE) MAX [11; 12] 3
1° 7 = (1)
spirati de la companya del companya de la companya della companya

5) Métado de Munton. e E=0,01
$\begin{cases} X_1 + X_2 = 5 \\ X_1^2 - X_2^2 = 5 \end{cases}$ com $X^0 = [1; 5]^{\dagger}$
1) $J = [1 \ 1]$ e $F(x_1, x_2) = [x_1 + x_2 - 5]$ $[2x_1 - 2x_2]$ e $[x_1^2 - x_2^2 - 5]$
2) Itaraçãos + K=0
$\begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 2 & -10 & 1 & 2 & 2 \end{bmatrix} = \begin{bmatrix} -1 & 1 & 1 \\ 2 & 2 & 2 & 2 \end{bmatrix}$
$\Rightarrow d \times 1^{\circ} = 1,5833$ $\Rightarrow d \times 2^{\circ} = -2,5833$
$4 \times 1^{1} = 1 + 1,5833 = 2,5833$ $4 \times 1^{1} = 5 - 2,5833 = 2,4167$
Erry: MAX { 1,5833 - 1-2,5833 3 = 1 > E > E MAX { 2,5833 12,4167 3
· Z=1
$\begin{bmatrix} 1 & 1 & 1 & 2 & 0 \\ 5,1666 & -4,8334 & 2 & 2 & 2 \\ \end{bmatrix} \begin{bmatrix} 2x_1^4 & 2 & 2 \\ 2x_2^4 & 2 & 2 \\ \end{bmatrix} \begin{bmatrix} 4,167 & 2 \\ 2x_1^4 & 2 & 2 \\ \end{bmatrix}$
spiral

