

ATIVIDADES WX MÁXIMA.

NOME: **MAYARA FAGUNDES SENA DA SILVA.**

1) $\text{limit}((x^2-9)/(x-3), x, 3);$

(%o1) 6

2) $\text{diff}(x^3-3*x+4,x,1);$

(%o2) $3*x^2$

3) $\text{integrate}(2*x-e^x, x);$

(%o3) $x^2e^x/\log(e)$

4) A: matrix(
[2,-1,0],
[3,2,1],
[2,-1,3]);

(A)matrix([2,1,0],[3,2,1],[2,1,3])

5) determinant(%);

(%o5) 21

6) A: matrix(
[2,-1,0],
[3,2,1],
[2,-1,3]);

(A)matrix([2,1,0],[3,2,1],[2,1,3])

7) invert(%);

(%o7) matrix([1/3,1/7,1/21],[1/3,2/7,2/21],[1/3,0,1/3])

8) A: matrix(
[2,-1,0],
[3,2,1],
[2,-1,3]);

[2,1,0],

[3,2,1],

[2,-1,3]);

(A)matrix([2,1,0],[3,2,1],[2,1,3])

9) eigenvalues(%)

(%o9)

[[((7*(sqrt(3)*%i)/21/2))/(9*((7*%i)/(2*3^(3/2))7/54)^(1/3))+((7*%i)/(2*3^(3/2))7/54)^(1/3)*((sqrt(3)*%i)/21/2)+7/3,((7*%i)/(2*3^(3/2))7/54)^(1/3)*((sqrt(3)*%i)/21/2)+(7*(sqrt(3)*%i)/21/2))/(9*((7*%i)/(2*3^(3/2))7/54)^(1/3))+7/3,((7*%i)/(2*3^(3/2))7/54)^(1/3)+7/(9*((7*%i)/(2*3^(3/2))7/54)^(1/3))+7/3],[1,1,1]]

10) A: matrix(

[2,1,0],

[3,2,1],

[2,-1,3]);

(A)matrix([2,1,0],[3,2,1],[2,1,3])

11) eigenvectors(%)

(%o12)

[[[(7*(sqrt(3)*%i)/21/2))/(9*((7*%i)/(2*3^(3/2))7/54)^(1/3))+((7*%i)/(2*3^(3/2))7/54)^(1/3)*((sqrt(3)*%i)/21/2)+7/3,((7*%i)/(2*3^(3/2))7/54)^(1/3)*((sqrt(3)*%i)/21/2)+(7*(sqrt(3)*%i)/21/2))/(9*((7*%i)/(2*3^(3/2))7/54)^(1/3))+7/3,((7*%i)/(2*3^(3/2))7/54)^(1/3)+7/(9*((7*%i)/(2*3^(3/2))7/54)^(1/3))+7/3],[1,1,1]],[[[1,

(6*((7*%i)/(2*3^(3/2))7/54)^(1/3)+((7*%i)/(2*3^(3/2))7/54)^(2/3)*(3^(5/2)*%i+9)*sqrt(3)*%i+7)/(18*((7*%i)/(2*3^(3/2))7/54)^(1/3)),(2^(5/3)*7^(4/3)*(3^(3/2)*%i1)^(1/3)+(3^(3/2)*%i1)^(2/3)*(2^(1/3)*3^(3/2)*7^(2/3)*%i+2^(1/3)*7^(2/3))112/84]],[[1,

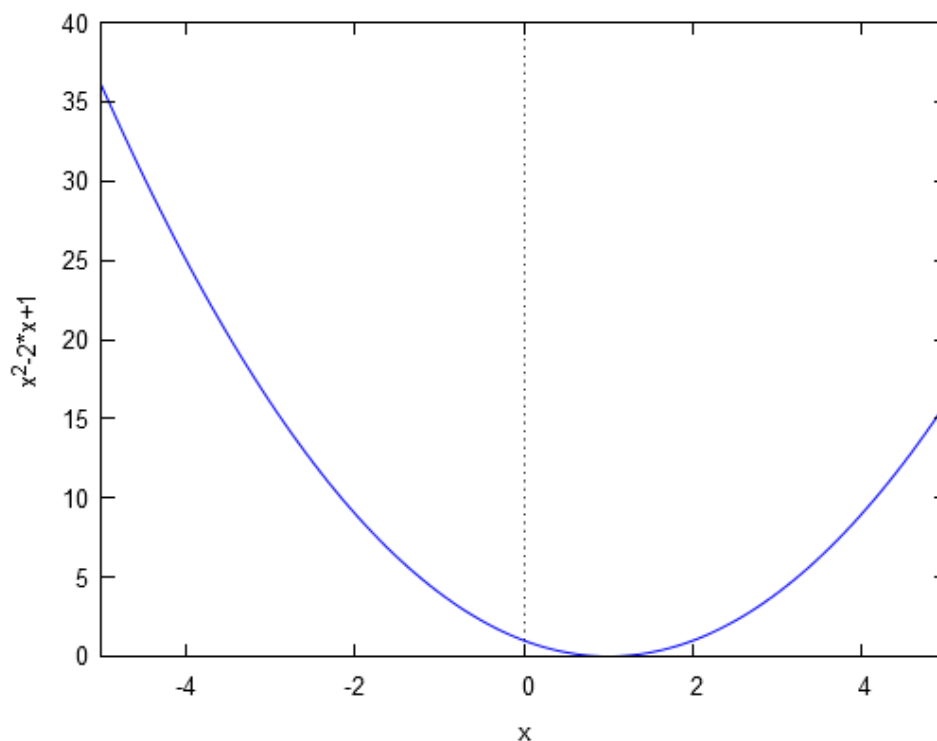
(6*((7*%i)/(2*3^(3/2))7/54)^(1/3)+((7*%i)/(2*3^(3/2))7/54)^(2/3)*(3^(5/2)*%i+9)*sqrt(3)*%i+7)/(18*((7*%i)/(2*3^(3/2))7/54)^(1/3)),((3^(3/2)*%i1)

$$\sqrt[1/3]{2^{2/3} \cdot \sqrt{3} \cdot 7^{4/3} \cdot i^{2/3} \cdot 7^{4/3}} + (3^{3/2} \cdot i^{1/3}) \cdot \sqrt[2/3]{2^{1/3} \cdot \sqrt{3} \cdot 7^{2/3} \cdot i + 5 \cdot 2^{1/3} \cdot 7^{2/3} + 112} / 84 \Big], [1,$$

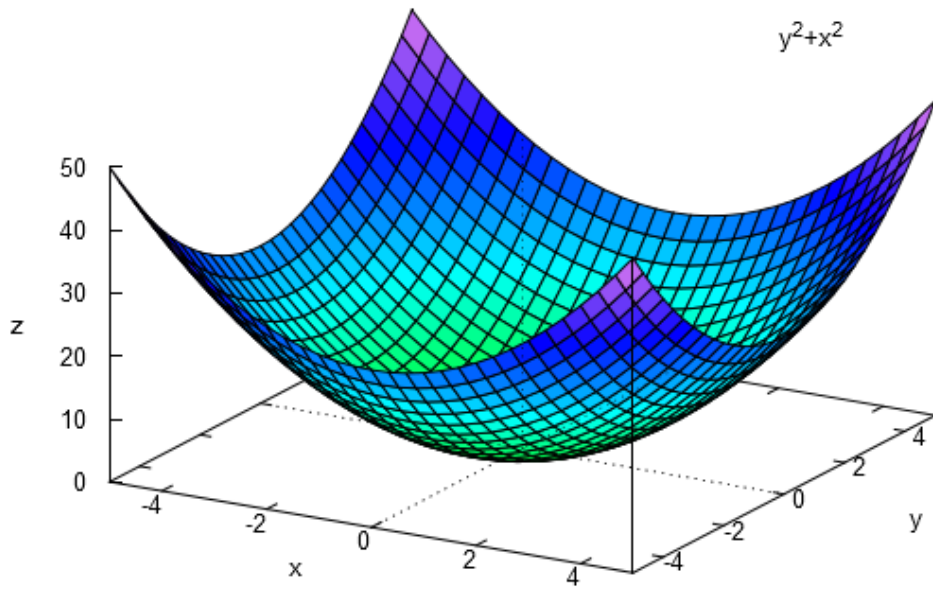
$$\frac{9 \cdot ((7 \cdot i) / (2 \cdot 3^{3/2})) \cdot 7 / 54 \sqrt[2/3]{} + 3 \cdot ((7 \cdot i) / (2 \cdot 3^{3/2})) \cdot 7 / 54 \sqrt[1/3]{} + 7}{9 \cdot ((7 \cdot i) / (2 \cdot 3^{3/2})) \cdot 7 / 54 \sqrt[1/3]{}}, ((3^{3/2} \cdot i^{1/3}) \sqrt[1/3]{2^{2/3} \cdot \sqrt{3} \cdot 7^{4/3} \cdot i^{2/3} \cdot 7^{4/3}} + (3^{3/2} \cdot i^{1/3}) \sqrt[2/3]{2^{4/3} \cdot \sqrt{3} \cdot 7^{2/3} \cdot i^{2/3} \cdot 7^{2/3}} + 112) / 84 \Big]]$$

Gráficos:

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1) wxplot2d([x^2-2*x+1], [x,-5,5])$
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2) wxplot3d(x^2+y^2, [x,-5,5], [y,-5,5])$
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3)