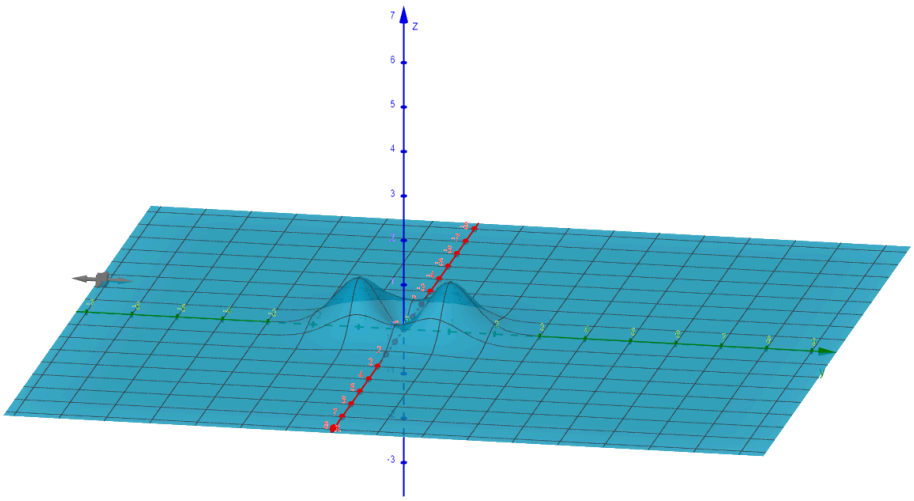
Exercícios 2

Para os exercícios a seguir, esboce o gráfico da função dada. Coloque a imagem do gráfico e como foi obtido (código do programa ou arquivo do Geogebra)

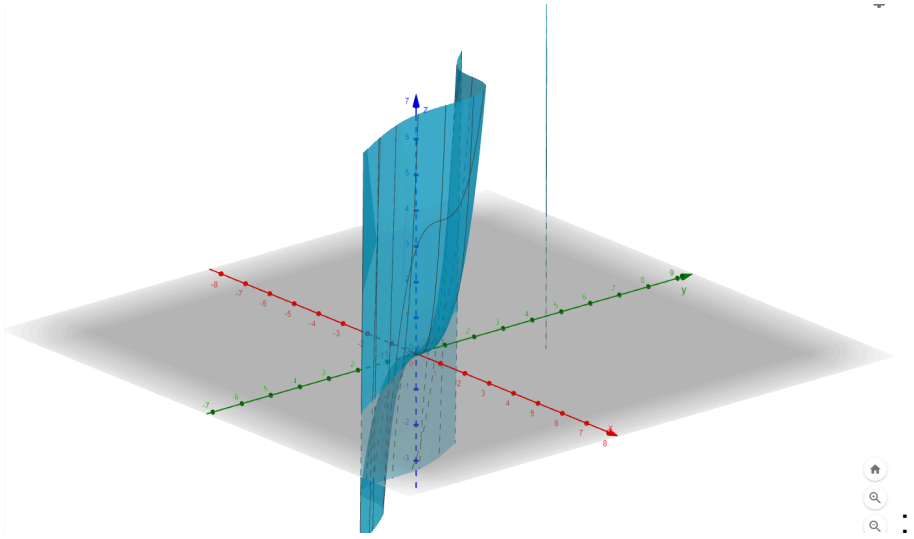
Questão 1: f(x,y)=(x^(2)+3 y^(2)) e^(-x^(2)-y^(2))

$$f(x,y) = (x^2 + 3\,y^2)\,e^{-x^2-y^2}$$



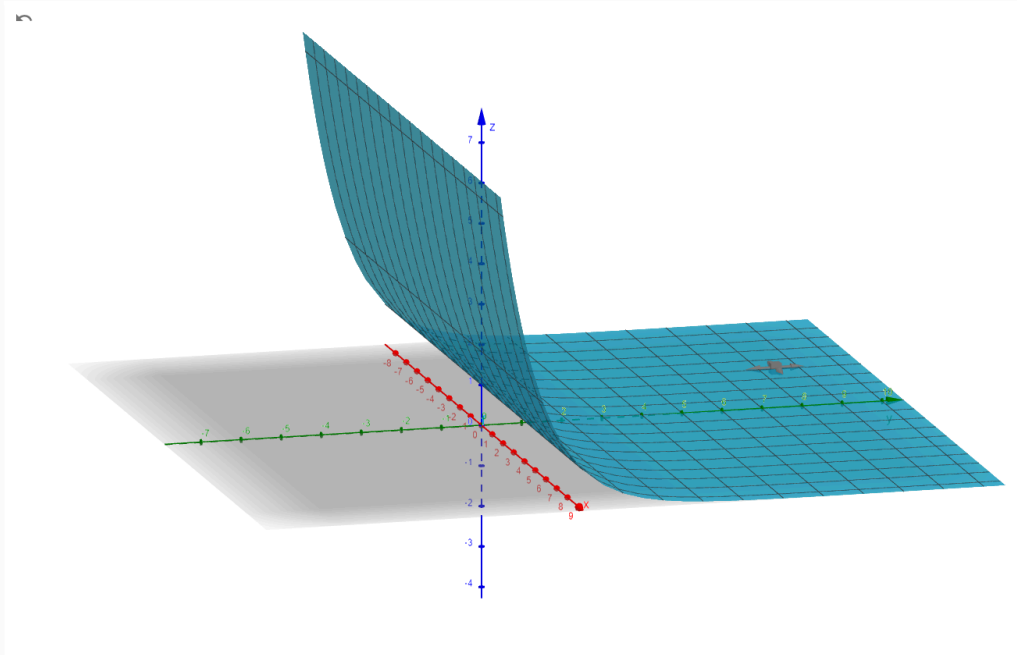
Questão 2: f(x,y)=4 x^(3)+y^(3)

$$f(x,y) = 4\,x^3 + y^3$$



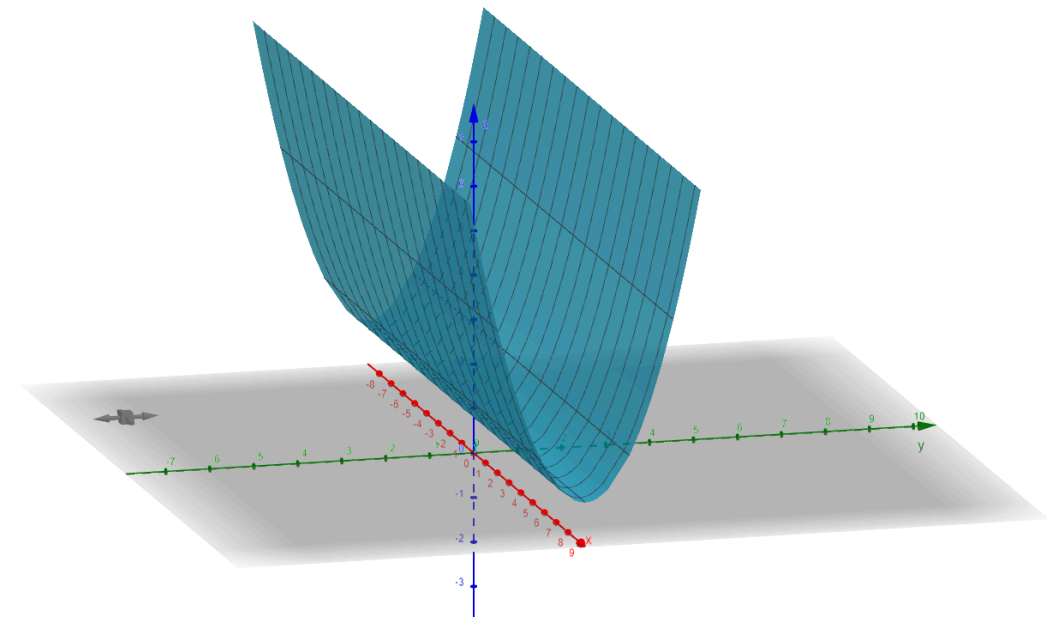
Questão 3: f(x,y)=*e*^(-y)

$f(x, y) = e^{-y}$



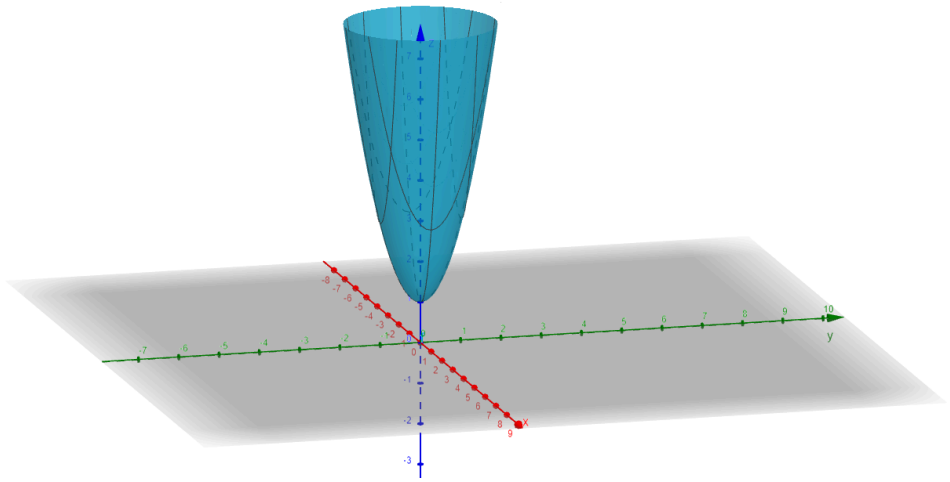
Questão 4: f(x,y)=y^(2)+1

$f(x, y) = y^2 + 1$



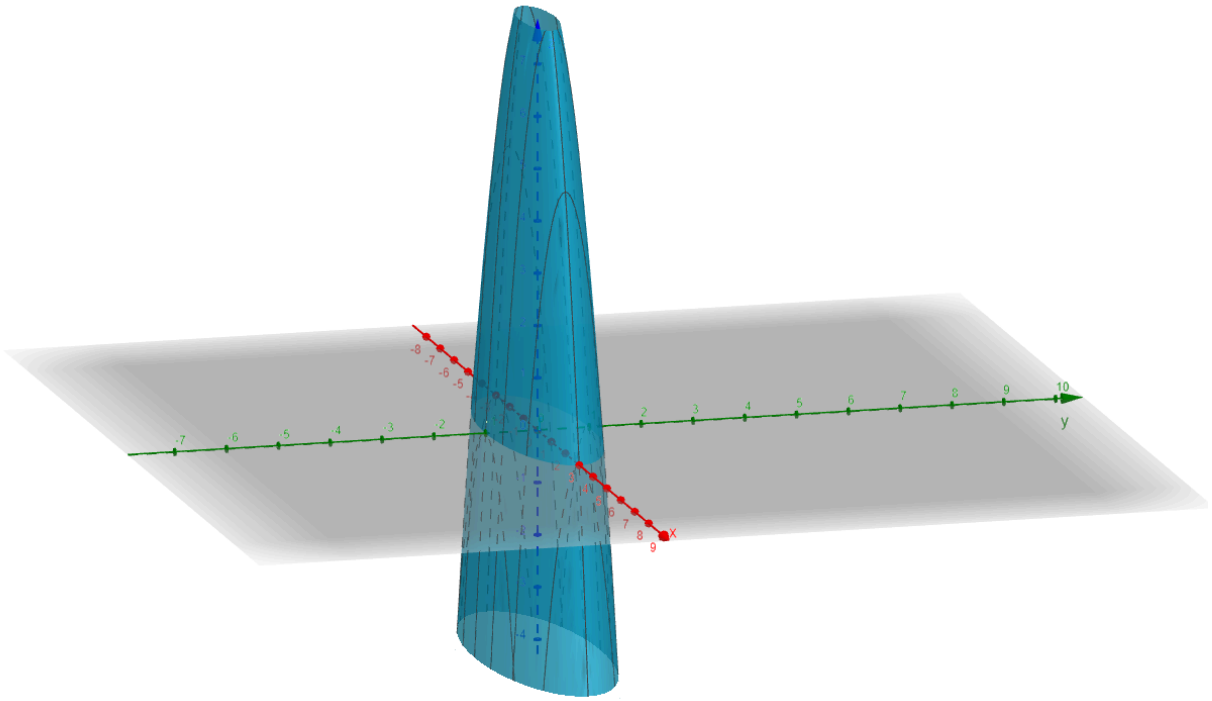
Questão 5: f(x,y)=1+2 x^(2)+2 y^(2)

$f(x,y) = 1 + 2\,x^2 + 2\,y^2$



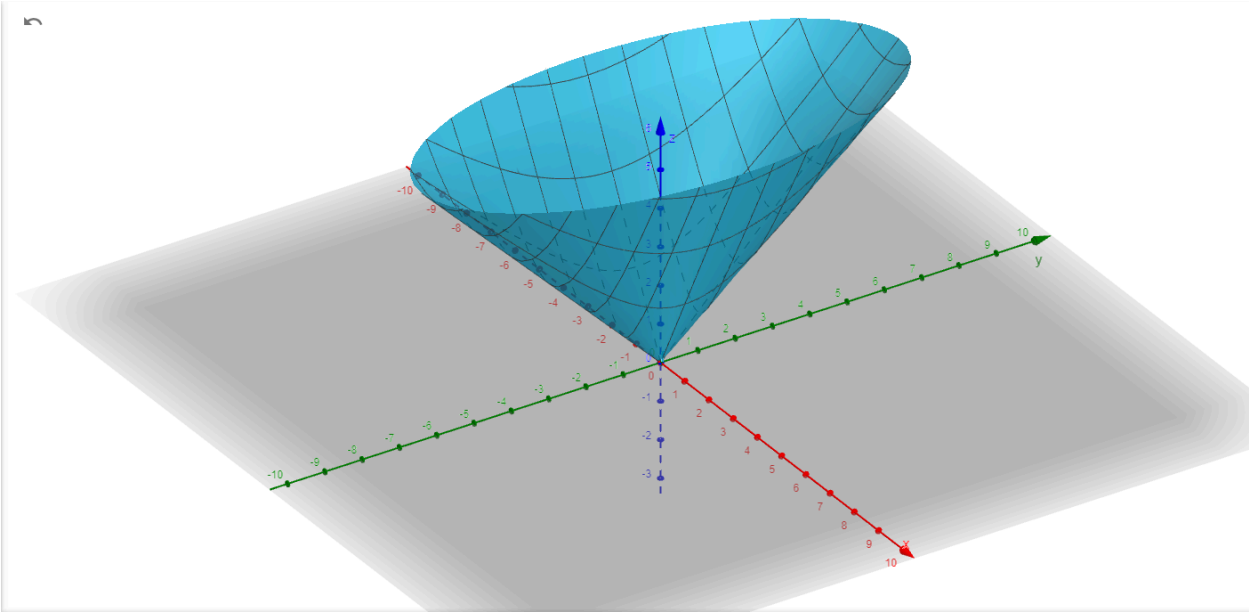
Questão 6: f(x,y)=9-x^(2)-9 y^(2)

$f(x,y) = 9 - x^2 - 9\,y^2$



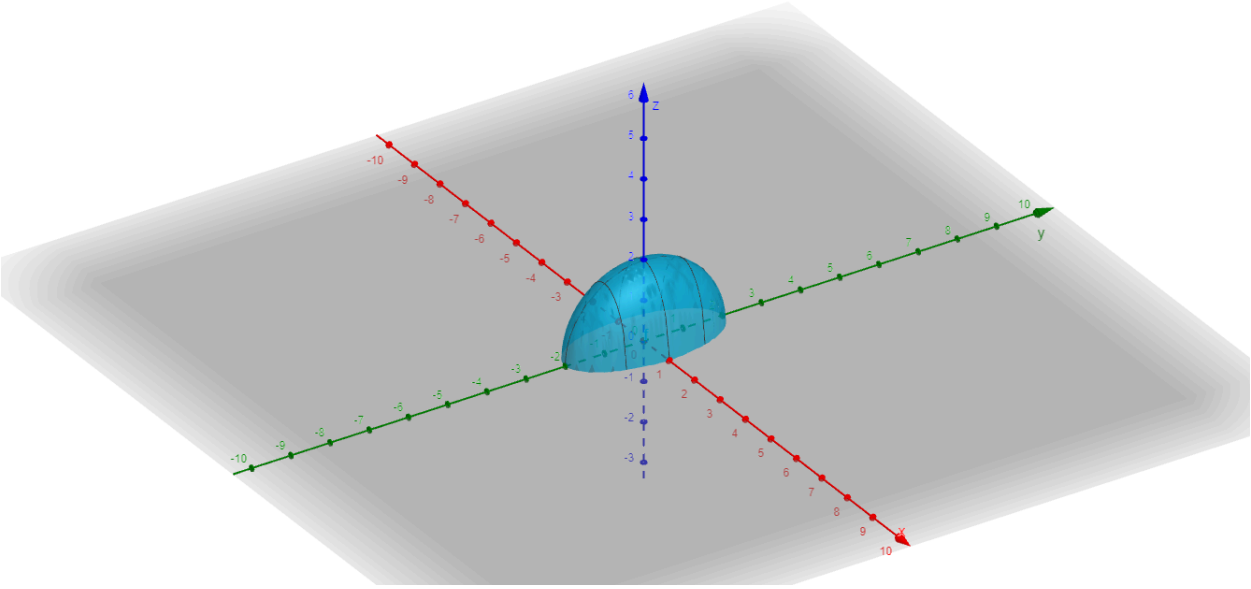
Questão 7: f(x,y)=sqrt(4 x^(2)+y^(2))

$$f(x, y) = \sqrt{4\,x^2 + y^2}$$



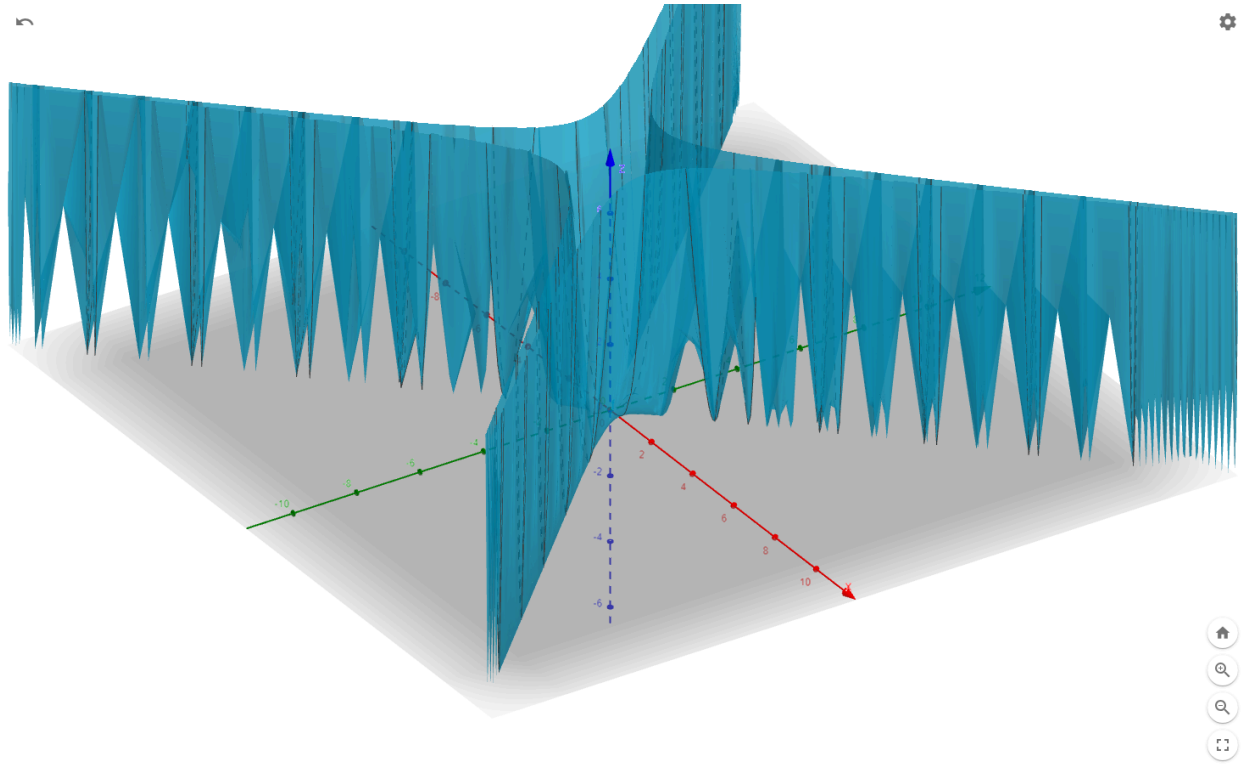
Questão 8: f(x,y)=sqrt(4-4 x^(2)-y^(2))

$$f(x, y) = \sqrt{4 - 4\,x^2 - y^2}$$



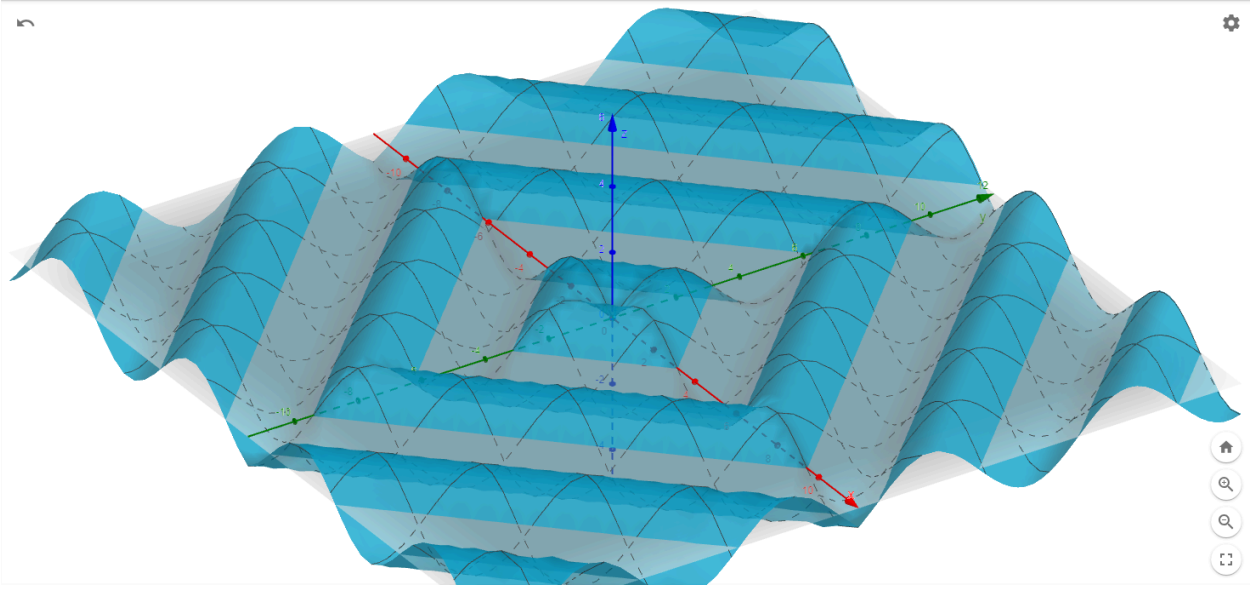
Questão 9: f(x,y)=(x^(2)-y^(2))^(2)

$$f(x, y) = (x^2 - y^2)^2$$



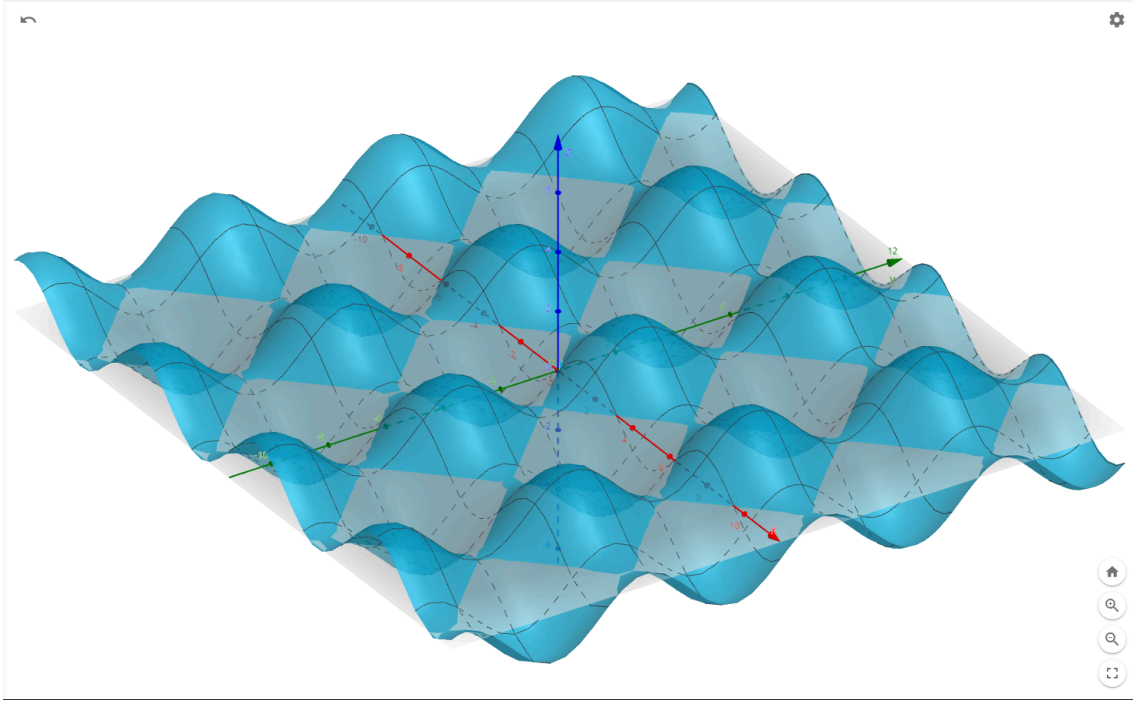
Questão 10: f(x,y)=sen(abs(x)+abs(y))

$$f(x, y) = \text{sen}(|x| + |y|)$$



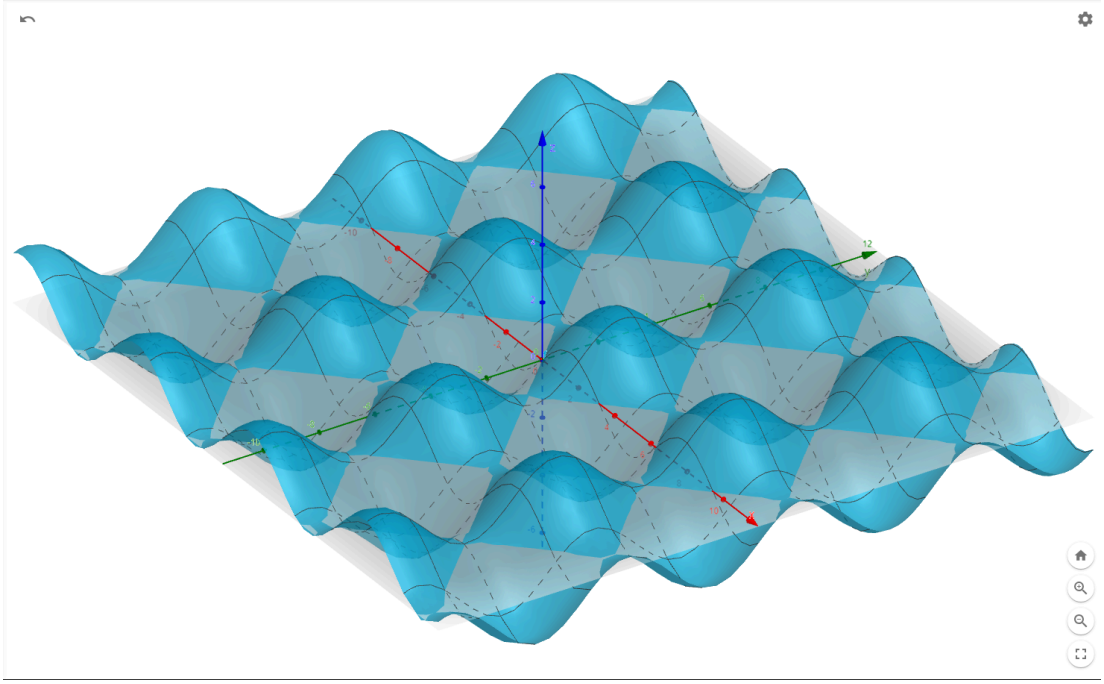
Questão 11: f(x,y)=sen(x)+sen(y)

$$f(x, y) = \text{sen}(x) + \text{sen}(y)$$



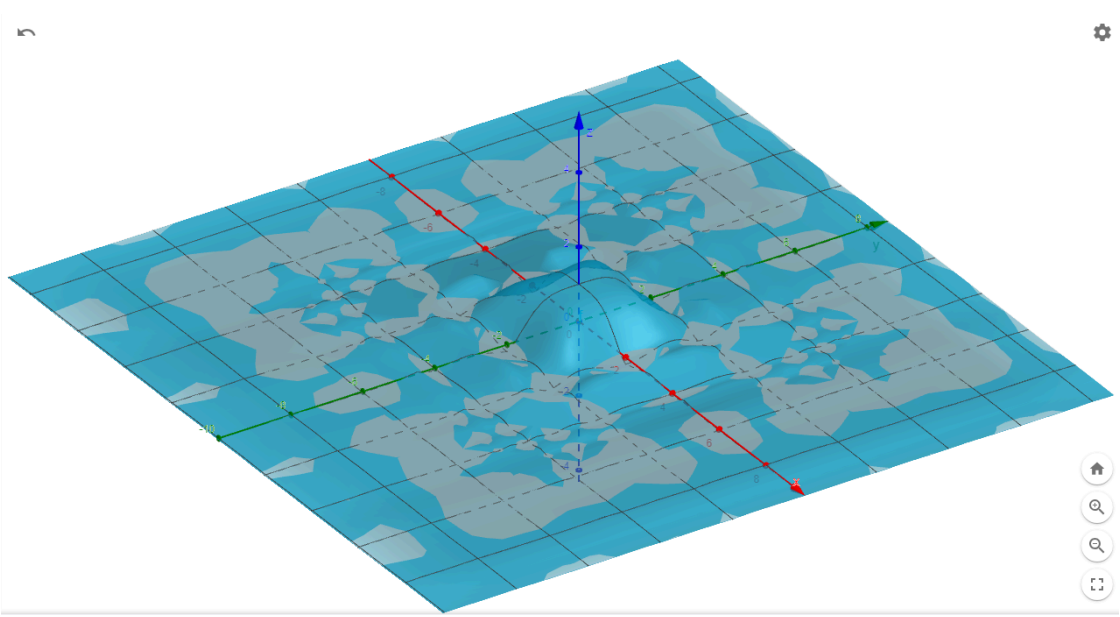
Questão 12: f(x,y)=sen(x)+sen(y)

$$f(x, y) = \text{sen}(x) + \text{sen}(y)$$



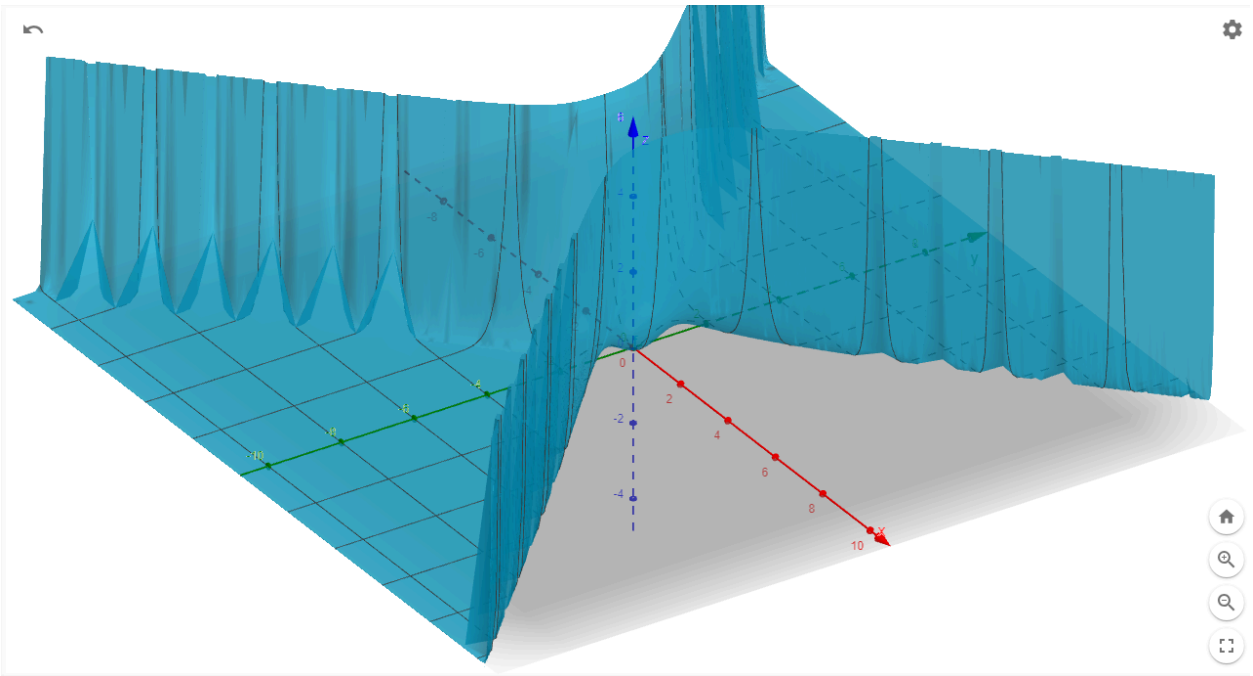
Questão 13: f(x,y)=((sen(x^(2))+sen(y^(2)))/(x^(2)+y^(2)))

$$f(x, y) = \frac{\operatorname{sen}(x^2) + \operatorname{sen}(y^2)}{x^2 + y^2}$$



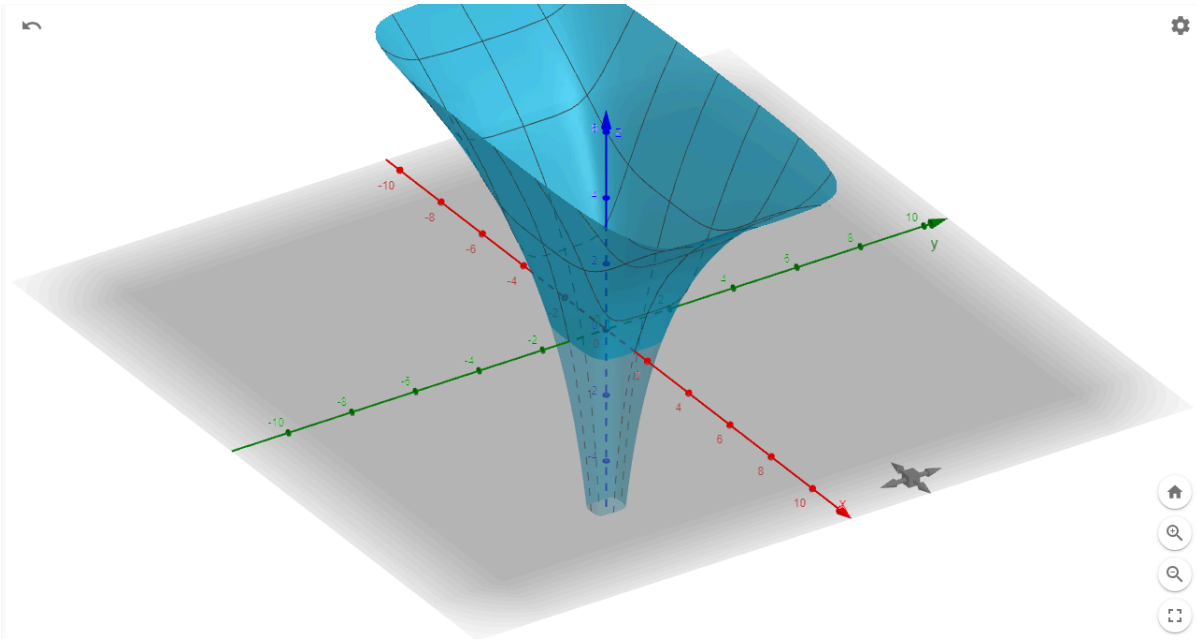
Questão 14: f(x,y)=(x^(2)+y^(2)) *e*^(x^(2)-y^(2))

$$f(x, y) = (x^2 + y^2)\, e^{x^2 - y^2}$$



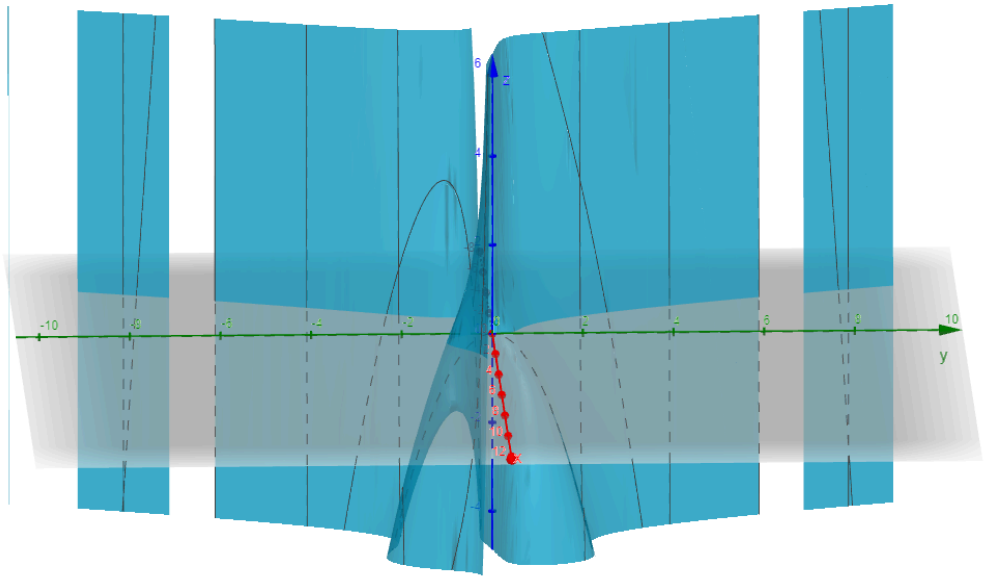
Questão 15: f(x,y)=ln(2 x^(4)+3 y^(6))-2

$$f(x, y) = \ln\left(2\,x^4 + 3\,y^6\right) - 2$$



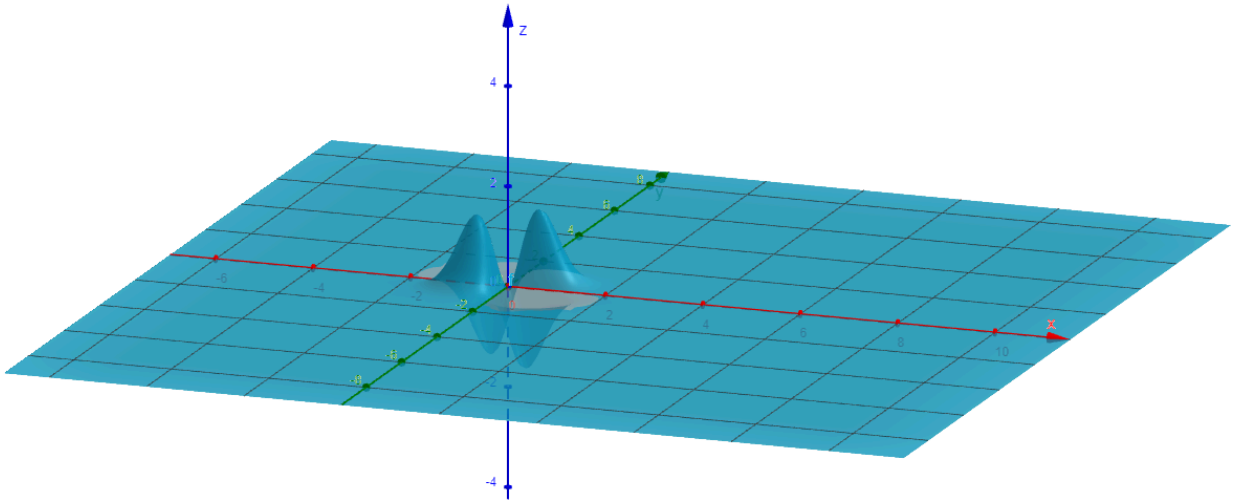
Questão 16: f(x,y)=x-x^(3)-y^(2)-((x)/(y))

$$f(x, y) = x - x^3 - y^2 - \frac{x}{y}$$



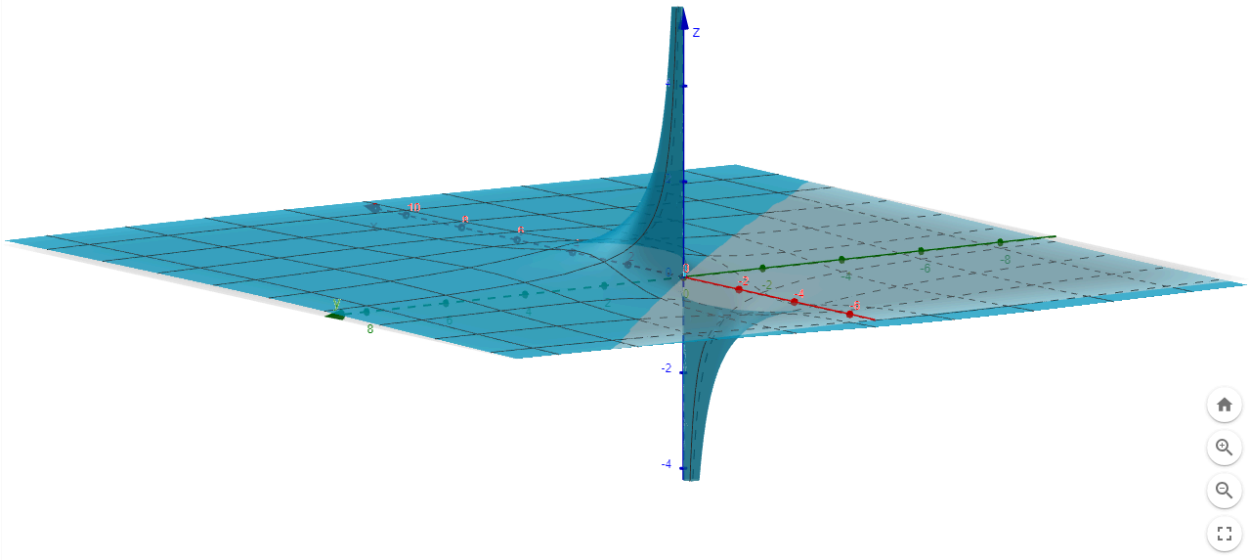
Questão 17: f(x,y)=20 x y e^(-2 x^(2)-3 y^(2))

$$f(x, y) = 20\,x\,y\,e^{-2x^2-3y^2}$$



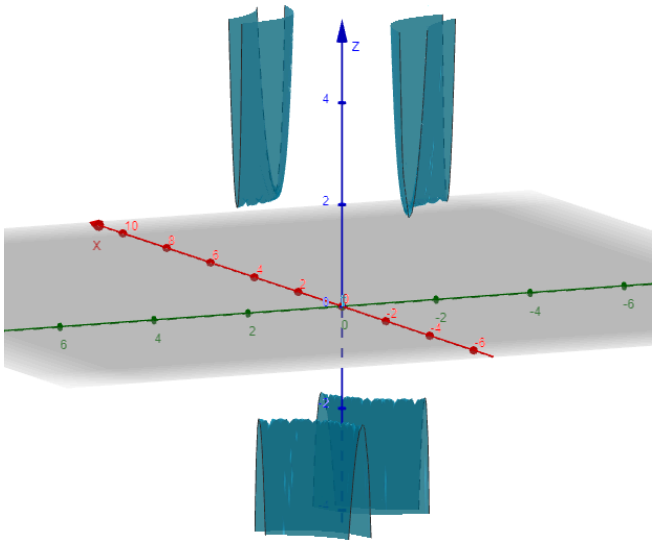
Questão 18: f(x,y)=((x+y)/(x^(2)+y^(2)))

$$f(x, y) = \frac{x + y}{x^2 + y^2}$$



Questão 19: f(x,y)=((x^(3))/(y^(-3)))+((y^(-3))/(x^(3)))

$$f(x,y) = \frac{x^3}{y^{-3}} + \frac{y^{-3}}{x^3}$$



Questão 20: f(x,y)=sen(cos(((x^(2) y^(2))/(x^(2)+y^(2)))))

$$f(x,y) = \operatorname{sen}\left(\cos\left(\frac{x^2\,y^2}{x^2+y^2}\right)\right)$$