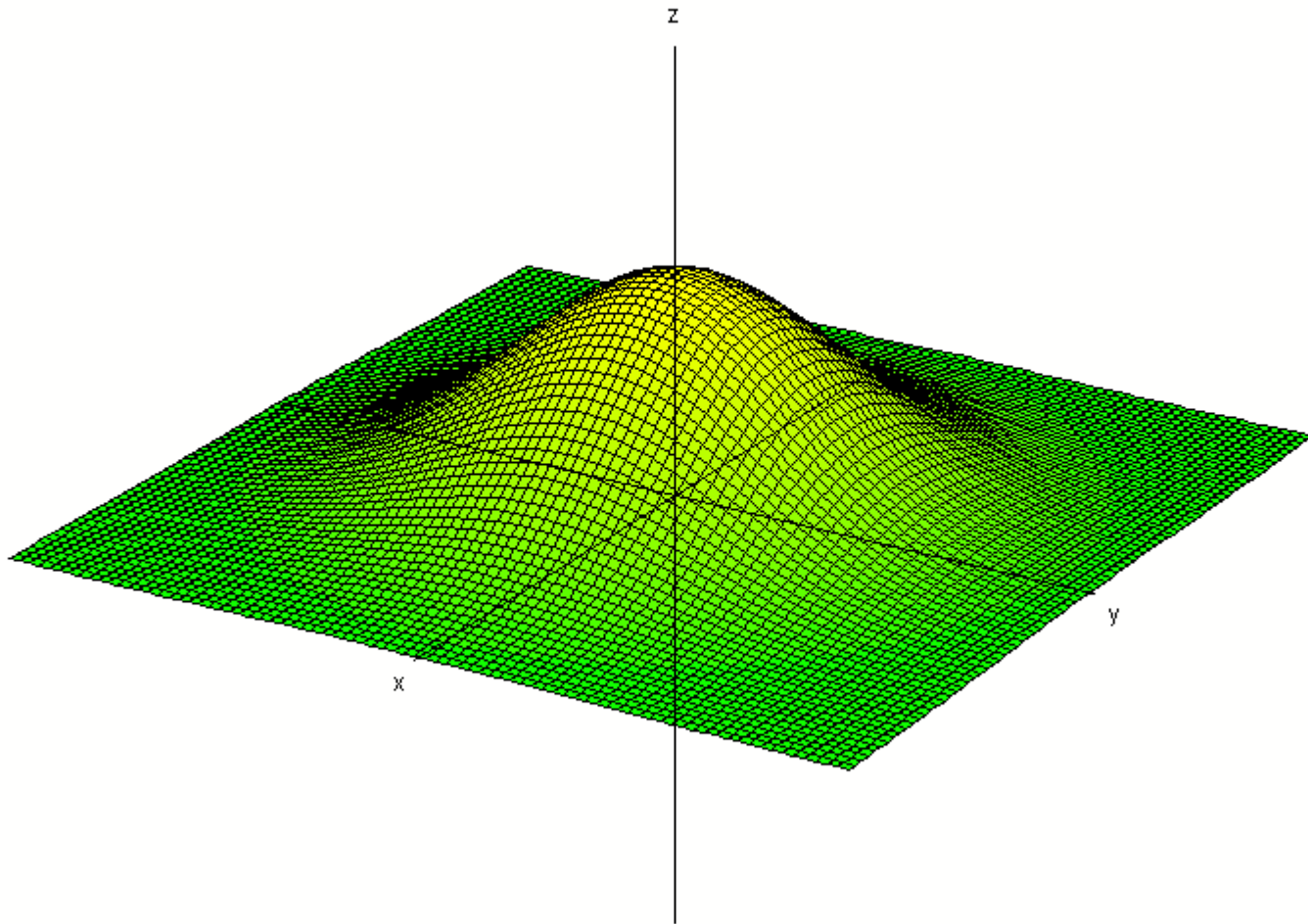


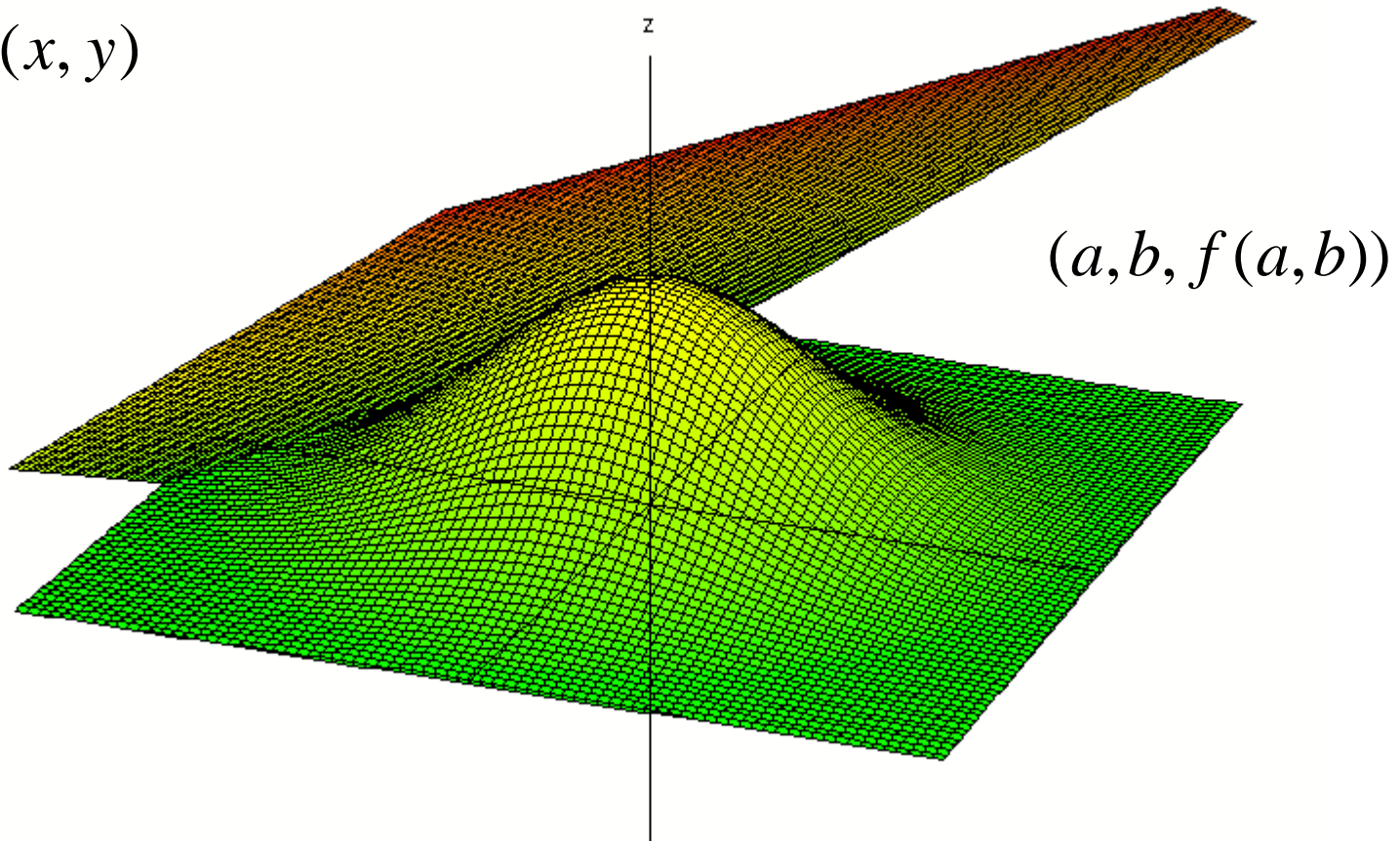
$$f(x, y) = e^{-(x^2+y^2)}$$

Superficies y planos



Plano tangente en un punto de la superficie

$$z = f(x, y)$$



$$z = \frac{\partial f(a, b)}{\partial x} (x - a) + \frac{\partial f(a, b)}{\partial y} (y - a) + f(a, b)$$

Instrucciones en el DERIVE

$$\#1: \hat{e}^{- (x^2 + y^2)}$$

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

$$\#3: f(x, y)$$

$$\#4: \frac{d}{dx} f(x, y)$$

$$\#5: \frac{d}{dy} f(x, y)$$

$$\#6: -2 \cdot x \cdot \hat{e}^{- x^2 - y^2}$$

$$\#7: -2 \cdot y \cdot \hat{e}^{- x^2 - y^2}$$

$$\#8: z = -2 \cdot a \cdot \hat{e}^{- a^2 - b^2} \cdot (x - a) + -2 \cdot b \cdot \hat{e}^{- a^2 - b^2} \cdot (y - b) + f(a, b)$$

$$\#9: z(a, b) := -2 \cdot a \cdot \hat{e}^{- a^2 - b^2} \cdot (x - a) + -2 \cdot b \cdot \hat{e}^{- a^2 - b^2} \cdot (y - b) + f(a, b)$$

$$\#10: z(0.3, 0.8)$$

$$\#11: -0.2891453940 \cdot x - 0.7710543841 \cdot y + 1.185496115$$