

$$1. f(x, y) = (4x - 5y)^{3/2}$$

Solución $\frac{\partial f}{\partial x} = 6(4x - 5y)^{1/2}, \frac{\partial f}{\partial y} = -\frac{15}{2}(4x - 5y)^{1/2}$

$$2. f(x, y) = x^2 \sin y^2$$

Solución $\frac{\partial f}{\partial x} = 2x \sin y^2, \frac{\partial f}{\partial y} = 2xy \cos y^2$

$$3. f(x, y) = e^y (\sin x - \cos x)$$

Solución $\frac{\partial f}{\partial x} = e^y (\cos x + \sin x), \frac{\partial f}{\partial y} = e^y (\sin x - \cos x)$

$$4. f(x, y) = xy + \frac{x}{y}$$

Solución

$$\frac{\partial f}{\partial x} = y + \frac{1}{y}, \frac{\partial f}{\partial y} = x - \frac{x}{y^2}$$

$$5. f(x, y) = \frac{x^2 + y^2}{x^2 - y^2} \ln(x^2 + y^2)$$

Solución

$$\frac{\partial f}{\partial x} = \frac{2x}{x^2 - y^2} - \frac{4xy^2}{(x^2 - y^2)^2} \ln(x^2 + y^2),$$



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continuación del 5

$$\frac{\partial f}{\partial x} = \frac{2x}{x^2 - y^2} + \frac{4x^2 y}{(x^2 - y^2)^2} \ln(x^2 + y^2).$$