

Answer on Question #58237 – Math – Calculus

Question

Suppose $f(x,y) = x^3y^2 - \sin^2x \cos 2y$, what is df/dy ?

Solution

If $f(x,y) = x^3y^2 - \sin^2x \cos 2y$, then

$$\frac{\partial f}{\partial y} = 2x^3y - \sin^2x \cdot (-\sin(2y)) \cdot 2 = 2(yx^3 + \sin^2x \sin 2y).$$

Answer: $\frac{\partial f}{\partial y} = 2(yx^3 + \sin^2x \sin 2y)$.