08

Calcule a derivada parcial

Calcule a derivada parcial:

$$\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right)$$

Onde: $f(x,y) = \sqrt{x^2 cos\,(y)}$

no ponto:

$$(x,y) = \left(\frac{\pi}{4}, \frac{\pi}{4}\right)$$

Mostre a derivada e em seguida o valor no ponto acima indicado (escolha uma única alternativa correta).

Selecione uma alternativa

A

a) $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right) = -\frac{xsin(y)}{2|x|\sqrt{cos\,(y)}}$ e: $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right)\left(\frac{\pi}{4}, \frac{\pi}{4}\right) = -2^{-5/4}$

B

C

e) $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right) = \frac{xsin(y)}{2|x|\sqrt{cos\,(y)}}$ e: $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right)\left(\frac{\pi}{4}, \frac{\pi}{4}\right) = 0$

D

b) $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right) = -\frac{sin(y)}{2\sqrt{cos\,(y)}}$ e: $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right)\left(\frac{\pi}{4}, \frac{\pi}{4}\right) = -2^{-5/4}$

E

c) $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right) = -\frac{x}{2|x|\sqrt{cos\,(y)}}$ e: $\frac{\partial}{\partial y}\left(\frac{\partial f}{\partial x}\right)\left(\frac{\pi}{4}, \frac{\pi}{4}\right) = +2^{-5/4}$