

Check your understanding

Let f be a function of x and y . Fix x_0 and y_0 .

27. Define a function g of t by $g(t) = f(x_0, y_0 + t)$. What is $\frac{dg}{dt}(0)$?
- (a) $\frac{\partial f}{\partial x}(x_0, y_0)$.
 - (b) $\frac{\partial f}{\partial x}(x_0, 0)$.
 - (c) $\frac{\partial f}{\partial y}(x_0, y_0)$.
 - (d) $\frac{\partial f}{\partial y}(x_0, 0)$.
28. Define a function h of t by $h(t) = f(x_0 - t, y_0)$. What is $\frac{dh}{dt}(0)$?
- (a) $\frac{\partial f}{\partial x}(0, y_0)$.
 - (b) $-\frac{\partial f}{\partial x}(0, y_0)$.
 - (c) $\frac{\partial f}{\partial x}(x_0, y_0)$.
 - (d) $-\frac{\partial f}{\partial x}(x_0, y_0)$.

Answers: (c), (d).