

QUESTION

If f is a function of x and y , but x and y both depend on both s and t , write down an expression for $\frac{\partial f}{\partial s}$ in terms of partial derivatives of f , x and y .

ANSWER

$$\frac{\partial f}{\partial s} = \frac{\partial f}{\partial x} \frac{\partial x}{\partial s} + \frac{\partial f}{\partial y} \frac{\partial y}{\partial s}$$