



W2-3-3 The total differential of a function with two variables 3

Take the function $y(x, z) = ax^2 + bz^2$. What is the partial derivative of this function, $y = y(x, z)$? Compute $\left(\frac{\partial y}{\partial z}\right)_x$.

The partial derivative $\left(\frac{\partial y}{\partial z}\right)_x = 2bz$.