



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