



## W2-3-1 The total differential of a function with two variables 1

A function  $y$  with two variables  $x$  and  $z$ , i.e.  $y = y(x, z)$  has been given.  
Give the total differential of this function.  $dy = \dots$

The total differential is:  $dy = \left(\frac{\partial y}{\partial x}\right)_z dx + \left(\frac{\partial y}{\partial z}\right)_x dz$ .