

The derivative of such a function is its derivative with respect to the independent variable t:

$$z'_t = \frac{dz}{dt}.$$

Such a function has **only** **partial derivatives** with respect to **independent variables**:

Preview from Notesale.com
Page 9 of 14

$$\frac{\partial z}{\partial x} = \frac{\partial z}{\partial u} \frac{\partial u}{\partial x} + \frac{\partial z}{\partial v} \frac{\partial v}{\partial x};$$

$$\frac{\partial z}{\partial y} = \frac{\partial z}{\partial u} \frac{\partial u}{\partial y} + \frac{\partial z}{\partial v} \frac{\partial v}{\partial y}.$$