Aula 08 - 14.1/4

Donal amorum Villa de Salar - 128.145

$$\frac{\partial z}{\partial y} = \frac{\partial}{\partial y} \left[ (x+y) \cdot e^{\frac{z}{y}} \right] = (x+y) \frac{\partial}{\partial y} \left[ e^{\frac{z}{y}} \right] + e^{\frac{z}{y}} \cdot \frac{\partial}{\partial y} \left[ (x+y) \right] = (x+y) e^{\frac{z}{y}} \left( -\frac{x}{y} \right) + e^{\frac{z}{y}}$$

$$\frac{\partial z}{\partial y} = e^{\frac{z}{y}} \cdot \left( 1 - \frac{x^2}{y^2} - \frac{x}{y} \right)$$

$$\frac{\partial^2 z}{\partial x \partial y} = \frac{\partial}{\partial x} \left[ \frac{\partial z}{\partial x} \right] = \frac{\partial}{\partial x} = \left[ e^{\frac{z}{y}} \cdot \left( 1 - \frac{x^2}{y^2} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{\partial x} \left[ \frac{\partial}{\partial y} \cdot \left( \frac{\partial}{\partial y} - \frac{x}{y} \right) \right] = \frac{\partial}{$$

$$\frac{\partial}{\partial x} \left[ \frac{1-x^2-x}{y^2} \right] + \left( \frac{1-x^2-x}{y^2} \right) + \left( \frac{1-x^2-x}{y^2}$$

$$\frac{2 \times \left[ y \quad y \right]}{y^2} \left( \frac{1 - y}{y} \right)$$

$$e^{\frac{x}{y}}\left[-2 \times -\frac{1}{y^2}\right] + \left(1 - \frac{x^2}{y^2} - \frac{x}{y}\right) \cdot e^{\frac{x}{y}} \cdot \int$$

$$\frac{\partial^2 z}{\partial y^2} = \frac{\partial}{\partial y} \left[ \frac{\partial z}{\partial y} \right] = \frac{\partial}{\partial y} \left[ \frac{\partial^2 z}{\partial y^2} + \frac{\partial^2 z}{\partial y} \right] = \frac{\partial^2 z}{\partial y^2} = \frac{$$

$$\begin{bmatrix} (1-x_{0}-x) \end{bmatrix} + (1-x_{0}-x)$$

$$\frac{9}{9} \begin{bmatrix} 9x \end{bmatrix} = \frac{9}{9} \begin{bmatrix} c_{\frac{3}{2}} \end{bmatrix} \cdot (1-x_{0}-x)$$

$$\frac{\partial^{2} z}{\partial y^{2}} = \frac{\partial}{\partial y} \left[ \frac{\partial z}{\partial y} \right] = \frac{\partial}{\partial y} \left[ \frac{\partial^{2} z}{\partial y^{2}} - \frac{x}{y} \right] = \frac{\partial^{2} z}{\partial y^{2}} = \frac{\partial}{\partial y} \left[ \frac{\partial^{2} z}{\partial y^{2}} - \frac{x}{y} \right] + \left( \frac{1 - x^{2} - x}{y^{2}} - \frac{x}{y} \right) \frac{\partial}{\partial y} \left[ \frac{\partial^{2} z}{\partial y^{2}} \right] = \frac{\partial^{2} z}{\partial y^{2}} = \frac{\partial^{2} z}{\partial y$$

 $e^{\frac{x}{8}\left(\frac{1}{2}x^{2}+\frac{x}{4}\right)} + \left(\frac{1-x^{2}-x}{y^{2}-y}\right) = \frac{e^{\frac{x}{8}}\left(-x}{y^{2}}\right)$ 

 $\frac{\partial^2 z}{\partial u^2} = e^{\frac{2\pi}{y}} \left[ 3 \cdot \frac{x^2}{y^3} + \frac{x^3}{y^4} \right]$ 

 $\times \frac{\partial^{3} z}{\partial x} + y \frac{\partial^{3} z}{\partial y^{2}} = \times \cdot e^{\frac{x}{y}} \left[ -\frac{x^{2}}{y^{3}} - \frac{3x^{2}}{y^{3}} \right] + y e^{\frac{y}{y}} \left[ 3 \cdot \frac{x^{2}}{y^{3}} + \frac{x^{3}}{y^{3}} \right]$ 

 $= e^{\frac{3}{3}} \left( \left[ \frac{-x^3}{y^3} - \frac{3x^2}{y^2} \right] + \left[ \frac{3 \cdot x^4}{y^2} + \frac{x^3}{y^3} \right] \right)$ 

Simplificando:  $\frac{\partial^2 z}{\partial x \partial y} = e^{\frac{x^2}{y}} \left[ -\frac{x^2}{y^3} - \frac{3x}{y} \right]$ 

$$\begin{bmatrix} 1 - x_{3} - x \end{bmatrix} + \begin{bmatrix} 1 - x_{3} - x \end{bmatrix}$$