

$$6. \quad \frac{\partial}{\partial x} \text{ARCTAN } X = -3 + e^y \quad \left(1, \text{Ln}\left(\frac{\pi}{2} + 3\right)\right)$$

$$\frac{d}{dx} (\underbrace{\frac{\partial}{\partial x} \text{ARCTAN } X}_P) = \frac{d}{dx} (-3) + \frac{d}{dx} (e^y)$$

$$P' = 0 \quad Q' = \frac{1}{1+x^2}$$

$$P'Q + PQ'$$

$$0 \cdot \text{ARCTAN } X + \frac{\partial}{\partial x} \left(\frac{1}{1+x^2}\right) = 0 + e^y \cdot y'$$

$$0 \cdot \text{ARCTAN } X + \frac{\partial}{\partial x} \frac{1}{1+x^2} = e^y y'$$

$$0(1+x^2) \text{ARCTAN } X + (1+x^2) \left(\frac{\partial}{\partial x} \frac{1}{1+x^2}\right) = e^y (1+x^2) y'$$

$$0(1+x^2) \text{ARCTAN } X + \partial x = e^y (1+x^2) y'$$

$$\frac{0(1+x^2) \text{ARCTAN } X + \partial x}{e^y (1+x^2)} = \frac{e^y (1+x^2) y'}{e^y (1+x^2)}$$

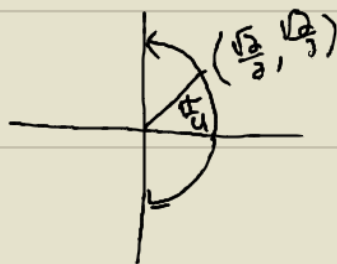
$$\frac{0(1+x^2) \text{ARCTAN } X + \partial x}{e^y (1+x^2)} = y'$$

$$\frac{0(1+1^2) \text{ARCTAN } 1 + \partial(1)}{e^{\text{Ln}\left(\frac{\pi}{2} + 3\right)} (1+1^2)} = y'$$

$$\frac{0 \text{ARCTAN } 1 + \partial}{\partial e^{\text{Ln}\left(\frac{\pi}{2} + 3\right)}} = y'$$

$$\frac{0\left(\frac{\pi}{4}\right) + \partial}{\partial\left(\frac{\pi}{2} + 3\right)} = y'$$

$$\boxed{\frac{\pi + \partial}{\pi + 6}} = y'$$



$$P = \text{ARCTAN } 1$$

$$\text{TAN } P = \text{TAN}(\text{ARCTAN } 1)$$

$$\text{TAN } P = 1$$

"y"
x

$$P = \frac{\pi}{4}$$