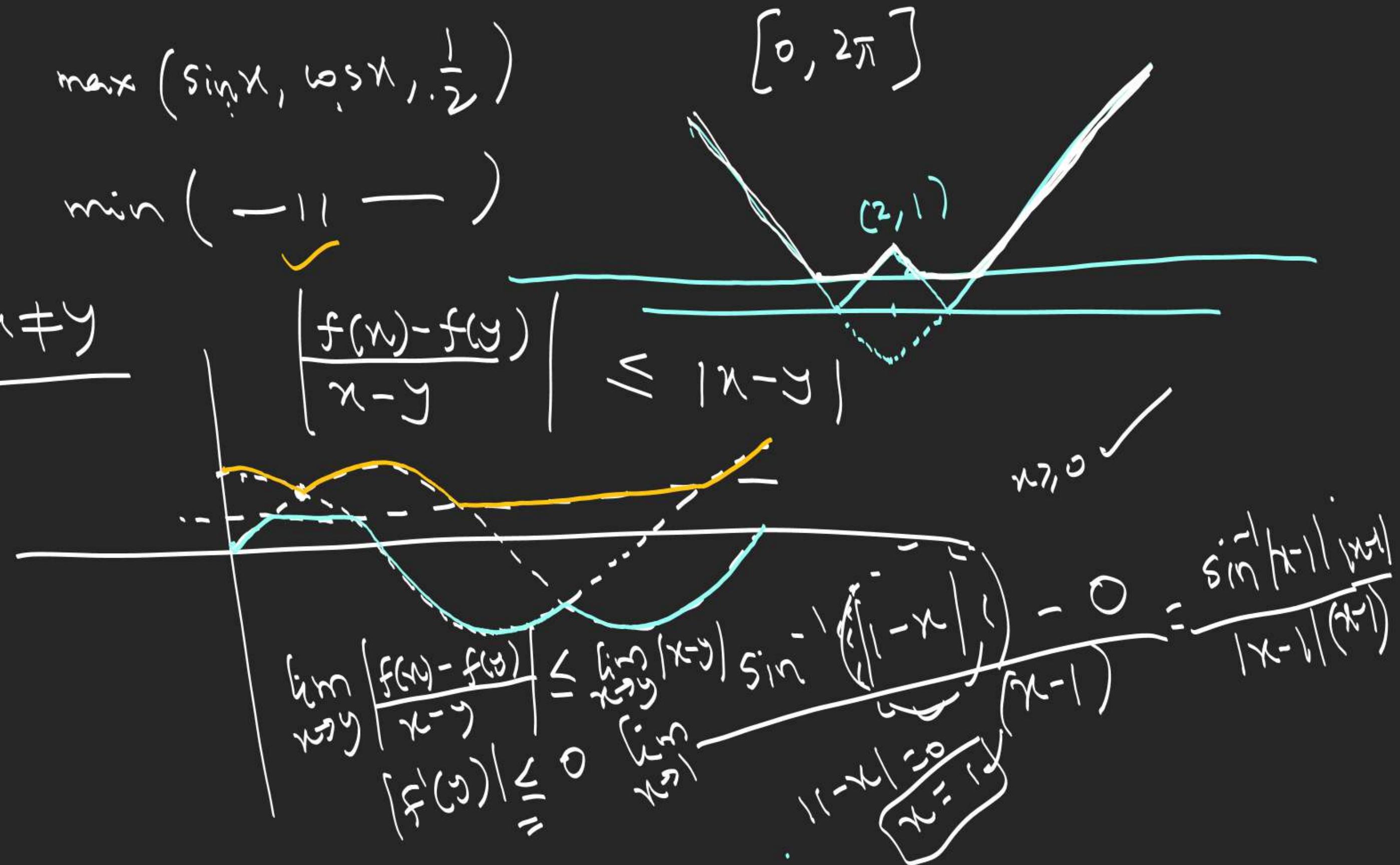


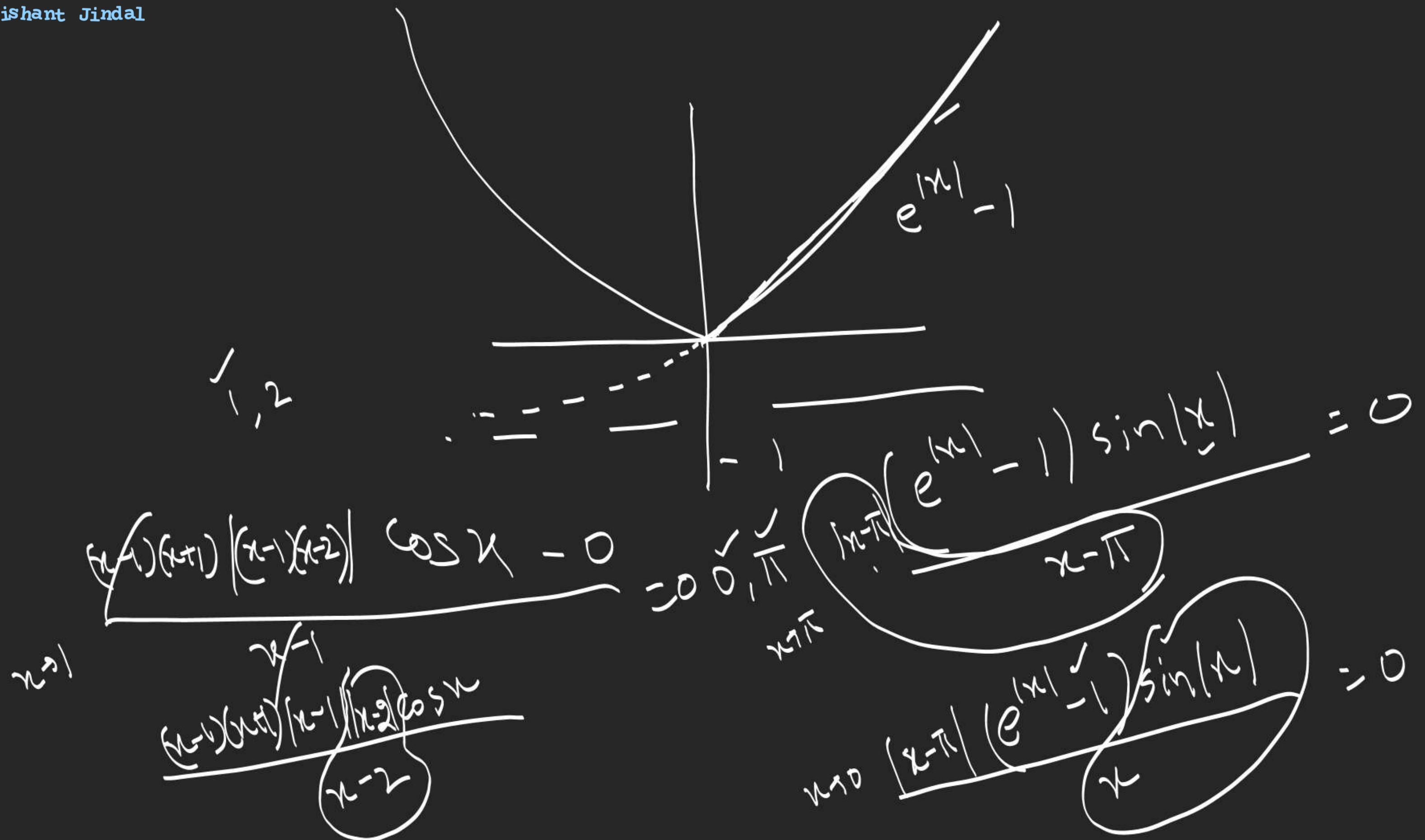
$$\max \left(\sin x, \cos x, \frac{1}{2} \right)$$

$$\min \left(-\frac{1}{2} \right)$$

$$\underline{x \neq y}$$

$$\left| \frac{f(n) - f(y)}{n - y} \right| \leq |n - y|$$





$$\sqrt{1-x^2} + \sqrt{1-y^2} = a(x-y)$$

$$\sin^{-1} x = \theta \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right], \sin^{-1} y = \phi \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$$

$$\frac{\theta + \phi}{2} \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$$

$$\cos \theta + \cos \phi = a(\sin \theta - \sin \phi)$$

$$2 \cos \frac{\theta + \phi}{2} \cos \frac{\theta - \phi}{2} = 2a \sin \frac{\theta - \phi}{2} \cos \frac{\theta + \phi}{2}$$

\therefore

$$\frac{\theta + \phi}{2} = -\frac{\pi}{2}, \frac{\pi}{2}$$

$$\sin^{-1} x + \sin^{-1} y = -\frac{\pi}{2}, \frac{\pi}{2}$$

$$(x, y) = (-1, 1), (1, 1)$$

$$1-18 (\epsilon_x - \bar{s})$$

$$\sin^{-1} x - \sin^{-1} y = \text{const}$$

$$\cot \frac{\theta - \phi}{2} = a$$

$$\cot^{-1} \cot \frac{\theta - \phi}{2} = \cot^{-1} a$$

$$\frac{\theta - \phi}{2} + n\pi = \cot^{-1} a$$

$$\frac{dy}{dx} = \frac{\sqrt{1-y^2}}{\sqrt{1-x^2}}$$

$$\frac{1}{\sqrt{1-y^2}} - \frac{1}{\sqrt{1-x^2}} \frac{dy}{dx} \approx 0$$