

$$y = \sqrt{\cos x}$$

$$y = \sqrt{u} \quad \text{und} \quad u = \cos x$$

$$y' = \frac{1}{2\sqrt{u}} \quad u' = -\sin x$$

$$\begin{aligned} y' &= \frac{1}{2\sqrt{u}} \cdot (-\sin x) \\ &= \frac{1}{2\sqrt{\cos x}} \cdot (-\sin x) \\ &= \frac{-\sin x}{2\sqrt{\cos x}} \end{aligned}$$