

$$\begin{aligned}y = \sin(\tan 5x) &\Rightarrow y' = \cos(\tan 5x) \cdot \frac{d}{dx}(\tan 5x) \\ &= \cos(\tan 5x) \cdot \sec^2(5x) \cdot \frac{d}{dx}(5x) = 5 \cos(\tan 5x) \sec^2(5x)\end{aligned}$$