

$$31) \frac{\cos x - \sin x}{\cos x + \sin x} = \sec 2x - \operatorname{tg} 2x$$

$$\begin{aligned} \rightarrow \frac{\cos x - \sin x}{\cos x + \sin x} &= \frac{\cos x - \sin x}{\cos x + \sin x} \cdot \frac{\cos x - \sin x}{\cos x - \sin x} \\ &= \frac{\cos^2 x - 2\sin x \cos x + \sin^2 x}{\cos^2 x - \sin^2 x} \\ &= \frac{1 - 2\sin x \cos x}{\cos 2x} \\ &= \frac{1 - \sin 2x}{\cos 2x} = \frac{1}{\cos 2x} - \frac{\sin 2x}{\cos 2x} \\ &= \sec 2x - \operatorname{tg} 2x \end{aligned}$$

$$32) \frac{1 - \cos 2x + \sin 2x}{1 + \cos 2x + \sin 2x} = \operatorname{tg} x$$

$$\begin{aligned} \rightarrow \frac{1 - \cos 2x + \sin 2x}{1 + \cos 2x + \sin 2x} &= \\ &= \frac{1 - (\cos^2 x - \sin^2 x) + 2\sin x \cos x}{1 + \cos^2 x - \sin^2 x + 2\sin x \cos x} \\ &= \frac{1 - \cos^2 x + \sin^2 x + 2\sin x \cos x}{1 - \sin^2 x + \cos^2 x + 2\sin x \cos x} \end{aligned}$$

