

$$\begin{aligned} (7) & \left(e^{-x}(\sin 2x + \cos 2x) \right)' \\ &= (e^{-x})'(\sin 2x + \cos 2x) + e^{-x}(\sin 2x + \cos 2x)' \\ &= -e^{-x}(\sin 2x + \cos 2x) + e^{-x}(2 \cos 2x - 2 \sin 2x) \\ &= e^{-x}(-3 \sin 2x + \cos 2x) \end{aligned}$$