

3.5

$$(23) f(x) = e^{-2x} \cdot \sin x$$

$$\begin{aligned} f'(x) &= (e^{-2x})(-2)(\sin x) + (e^{-2x})(\cos x) = -2\sin x(e^{-2x}) + (e^{-2x})(\cos x) \\ &= e^{-2x}[\cos x - 2\sin x] \end{aligned}$$