

7.3.8.

$$\begin{aligned} L\{e^{-2t} \cos 4t\} &= L\{e^{at} f(t)\} = F(s - a) \\ &= L\{\cos 4t\} = \frac{s}{s^2 + 4^2} \end{aligned}$$

$$= \frac{s - (-2)}{(s - (-2))^2 + 4^2} = \frac{s + 2}{(s + 2)^2 + 4^2} = \frac{s + 2}{s^2 + 4s + 20}$$