7.3.16.

$$L^{-1}\left[\frac{2s+5}{s^2+6s+34}\right] = L^{-1}\left[\frac{2(s+3)-1\frac{1}{5}5}{(s+3)^2+5^2}\right] =$$

$$e^{at}f(t) = L^{-1}\{F(s-a)\}$$

$$= F(s) = 2\frac{s}{s^2+5^2} - \frac{1}{5}\frac{5}{s^2+5^2} =$$

$$= e^{-3t}(2\cos5t - \frac{1}{5}\sin5t)$$