

13.8 Use property number 5 to find $\mathcal{L}[f(t)]$ if $f(t) = e^{-at}u(t-1)$. **CS**

SOLUTION:

$$\mathcal{L}[f(t)] = e^{-s} \mathcal{L}[e^{-a(t+1)}] = e^{-s} e^{-a} \mathcal{L}[e^{-at}]$$

$$F(s) = e^{-(s+a)} \mathcal{L}[e^{-at}]$$

$$F(s) = \frac{e^{-(s+a)}}{s+1}$$