$$\begin{cases} y''(t) + 4y'(t) + 4y(t) = 0 \quad (1) \\ y(0^+) = 1 \\ y'(0^+) = 1 \end{cases}$$

we define:

$$\begin{cases} L(y'') = s^2 Y(s) - sY(0) - Y'(0^+) \\ L(y') = sY(s) - y(0) \\ L(y) = Y(s) \end{cases}$$

$$(1) \quad s^2 Y(s) - sy(0) - Y'(0) + 4(sY(s) - Y(0))$$

$$+ 4Y(s) = 0$$

$$\Leftrightarrow \quad s^2 Y(s) - s - 1 + 4s\,Y(s) - 4 + 4Y(s) = 0$$

$$\Leftrightarrow \quad s^2 Y(s) + 4s\,Y(s) + 4Y(s) - (s+5) = 0$$

$$\Leftrightarrow \quad \frac{s+5}{s^2+4s+4} = Y(s) \overset{\text{maple}}{=} (3t+1)e^{-2t} \cdot \theta(t)$$

heaviside function