Solution (#1692) (i)

$$\frac{1}{s(s+1)} \overset{\mathcal{L}^{-1}}{\longmapsto} 1 - e^{-x}.$$

(ii)

$$\frac{1-e^{-s}}{s} \overset{\mathcal{L}^{-1}}{\longmapsto} \mathbf{1}_{(0,1)}(x).$$

(iii)

$$\frac{e^{-s-1}}{s^2} \overset{\mathcal{L}^{-1}}{\longmapsto} \frac{1}{e}(x-1)H(x-1).$$

(iv)

$$\frac{e^{-2s+3}}{s^2+1} \overset{\mathcal{L}^{-1}}{\longmapsto} e^{-3}\sin(x-2)H(x-2).$$