$$\begin{array}{c|c} f(t) = \mathcal{L}^{-1}[F(s)] & \mathcal{L}[f(t)] = F(s) \\ \hline H(t) & \frac{1}{s} \\ t & \frac{1}{s^2} \\ t^n & (n \in \mathbb{N}) & \frac{n!}{s^{n+1}} \\ \hline \sqrt{t} & \frac{1}{2}\sqrt{\pi}s^{-3/2} \\ \frac{1}{\sqrt{t}} & \sqrt{\pi}s^{-1/2} \\ e^{at} & \frac{1}{s-a} \\ \sin(\omega t) & \frac{\omega}{s^2+\omega^2} \\ \cos(\omega t) & \frac{s}{2} \\ \hline \end{array}$$

$$\begin{array}{c|cccc} f(t) = \mathcal{L}^{-1}[F(s)] & \mathcal{L}[f(t)] = F(s) \\ \hline sinh(at) & \frac{a}{s^2 - a^2} \\ \hline cosh(at) & \frac{5}{s^2 - a^2} \\ \hline H(t-b) & \frac{1}{s}e^{-bs} \\ \hline \delta(t-b) & e^{-bs} \\ \hline a(4\pi t^3)^{-1/2}e^{-a^2/4t} & e^{-a\sqrt{s}} \\ \hline (\pi t)^{-1/2}e^{-a^2/4t} & \frac{1}{\sqrt{s}}e^{-a\sqrt{s}} \\ \hline 1 - \mathcal{E}rf\left(\frac{a}{\sqrt{4t}}\right) & \frac{1}{s}e^{-a\sqrt{s}} \end{array}$$