

FORMULARIO DE TRANSFORMADAS DE LAPLACE

| | |
|--------------------------------|---|
| 1 | $\frac{1}{s}$ |
| t | $\frac{1}{s^2}$ |
| t^n | $\frac{n!}{s^{n+1}}$ |
| $\frac{1}{\sqrt{t}}$ | $\sqrt{\frac{\pi}{s}}$ |
| e^{-at} | $\frac{1}{s+a}$ |
| $t \cdot e^{-at}$ | $\frac{1}{(s+a)^2}$ |
| $t^n \cdot e^{-at}$ | $\frac{n!}{(s+a)^{n+1}}$ |
| $\text{sen}(wt)$ | $\frac{w}{s^2 + w^2}$ |
| $\text{cos}(wt)$ | $\frac{s}{s^2 + w^2}$ |
| $\text{sen}(wt + \theta)$ | $\frac{s \cdot \text{sen}(\theta) + w \cdot \text{cos}(\theta)}{s^2 + w^2}$ |
| $\text{cos}(wt + \theta)$ | $\frac{s \cdot \text{cos}(\theta) - w \cdot \text{sen}(\theta)}{s^2 + w^2}$ |
| $e^{-at} \cdot \text{sen}(wt)$ | $\frac{w}{(s+a)^2 + w^2}$ |
| $e^{-at} \cdot \text{cos}(wt)$ | $\frac{s+a}{(s+a)^2 + w^2}$ |
| $t \cdot \text{sen}(wt)$ | $\frac{2ws}{(s^2 + w^2)^2}$ |
| $t \cdot \text{cos}(wt)$ | $\frac{s^2 - w^2}{(s^2 + w^2)^2}$ |
| $\text{senh}(wt)$ | $\frac{w}{s^2 - w^2}$ |
| $\text{cosh}(wt)$ | $\frac{s}{s^2 - w^2}$ |

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|--|--|
| $e^{-at} \cdot f(t)$ | $sF(s+a)$ |
| $t^n \cdot f(t)$ | $(-1)^n \cdot \frac{d^n}{ds^n} F(s)$ |
| $f(t-a)U(t-a), a > 0$ | $e^{-as} \cdot F(s)$ |
| $\delta(t-t_0)$ | e^{-st_0} |
| $\frac{df(t)}{dt}$ | $sF(s) - f(0^+)$ |
| $\frac{d^2 f(t)}{dt^2}$ | $s^2 F(s) - s \cdot f(0^+) - f^{(1)}(0^+)$ |
| $f^{(n)}(t)$ | $s^n F(s) - s^{n-1} \cdot f(0^+) - \dots - f^{(n-1)}(0^+)$ |
| $\int_0^t f(\tau) d\tau$ | $\frac{F(s)}{s}$ |
| $f(t-t_1)$ | $e^{-t_1 s} F(s)$ |
| $c_1 f_1(t) + c_2 f_2(t)$ | $c_1 F_1(s) + c_2 F_2(s)$ |
| $\int_0^t f_1(\tau) \cdot f_2(t-\tau) d\tau$ | $F_1(s) \cdot F_2(s)$ |