

Operational Properties II

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- The derivative of a transform is: $\mathcal{L}\{t^n f(t)\} = (-1)^n \frac{d^n}{ds^n} F(s)$
- A convolution (f convolves g) is defined as [\(1\)](#)

$$f * g = \int_0^t f(\tau)g(t - \tau) d\tau \tag{1}$$