

$$\mathcal{L}(y') = s \mathcal{L}(y) - y(0)$$

$$\mathcal{L}(y'') = s^2 \mathcal{L}(y) - s y(0) - y'(0)$$

$$\mathcal{L}(u_a(t) \cdot F(t-a)) = e^{-as} Y(s)$$

WHERE $Y(s) = \mathcal{L}(F(t))$

$$\mathcal{L}(\delta_a(t)) = e^{-as}$$

$$\mathcal{L}(c) = c/s$$

$$\mathcal{L}(e^{at}) = 1/s-a$$

$$\mathcal{L}(u_a(t)) = e^{-as}/s$$

$$\mathcal{L}(\sin bt) = b/s^2+b^2$$

$$\mathcal{L}(\cos bt) = s/s^2+b^2$$

$$\mathcal{L}(e^{at} \sin bt) = b/(s-a)^2+b^2$$

$$\mathcal{L}(e^{at} \cos bt) = \frac{s-a}{(s-a)^2+b^2}$$