

TOOL: A pole location in the s -domain corresponds to a specific exponential function in the t -domain.

$$\frac{1}{s+a} \xrightarrow{\mathcal{L}^{-1}} e^{-at}$$

TOOL: A pole location repeated n times in the s -domain corresponds to $t^{n-1}/(n-1)!$ times a specific exponential function in the t -domain.

$$\frac{1}{(s+a)^n} \xrightarrow{\mathcal{L}^{-1}} \frac{t^{n-1}}{(n-1)!} \cdot e^{-at}$$

PICT: The diagram below shows t -domain waveforms versus pole positions in the s -domain.

