

Reading: Boas 8.8 and 8.9 on Laplace transforms **NB:** Boas uses p for s .

- (1) Laplace transforms
 - (a) Using the definition compute $\mathcal{L}[t^n]$.
 - (b) Check your result for t^5 with Mathematica. The command is `LaplaceTransform[f[t], t, s]`.
 - (c) With the result from part (a) verify the inverse Laplace transform we used in class on Tuesday,

$$\mathcal{L}^{-1}\left[\frac{1}{s^n}\right] = \frac{t^{n-1}}{(n-1)!}$$