

Funns grensverdiene

3.4.1

$$\lim_{x \rightarrow \infty} x^3 e^{-x}$$

Lösning

$$\lim_{x \rightarrow \infty} x^3 e^{-x} = \lim_{x \rightarrow \infty} \frac{x^3}{e^x} = \underline{0} \quad \text{ved TH5a)}$$

3.4.3 $\lim_{x \rightarrow \infty} \frac{2e^x - 3}{e^x + 5}$

Lösning:

$$\begin{aligned} \lim_{x \rightarrow \infty} \frac{2e^x - 3}{e^x + 5} &= \lim_{x \rightarrow \infty} \frac{2 - 3e^{-x}}{1 + 5e^{-x}} \\ &= \frac{2 - 0}{1 + 0} = \underline{2} \end{aligned}$$