A Quarto Page Layout Example

Inspired by Tufte Handout, Using Quarto

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$Ga(\alpha, \beta)$

M_X(t)[1]

$$
\begin{aligned}
M_X(t) = E[e^{tX}] &= \int_{-\infty}^{\infty} e^{tx} f(x) dx && (1)\\
&= \int_{0}^{\infty} e^{tx} \frac{x^{\alpha-1} e^{-x/\beta}}{\Gamma(\alpha)\beta^{\alpha}} dx && (2)\\
&= \int_{0}^{\infty} \frac{x^{\alpha-1} \exp\{-\frac{1-\beta t}{\beta} x\}}{\Gamma(\alpha)\beta^{\alpha}} dx && (3)\\
&= \int_{0}^{\infty} \frac{x^{\alpha-1} \exp\{-\frac{1-\beta t}{\beta} x\}}{\Gamma(\alpha)(\frac{\beta}{1-\beta t})^{\alpha}(1-\beta t)^{\alpha}} dx && (4)\\
&= (1-\beta t)^{-\alpha} \int_{0}^{\infty} \frac{x^{\alpha-1} \exp\{-\frac{1-\beta t}{\beta} x\}}{\Gamma(\alpha)(\frac{\beta}{1-\beta t})^{\alpha}} dx && (5)\\
&= (1-\beta t)^{-\alpha} && (6)
\end{aligned}
$$

Introduction

This document demonstrates the use of a number of advanced page layout features to produce an attractive and usable document inspired by the Tufte handout style and the use of Tufte's styles in RMarkdown documents [@xie2018]. The Tufte handout style is a style that Edward Tufte uses in his books and handouts. Tufte's style is known for its extensive use of sidenotes, tight integration of graphics with text, and well-set typography. Quarto supports most of the layout techniques that are used in the Tufte handout style for both HTML and LaTeX/PDF output.

?quarto-cite:xie2018

We know from *the first fundamental theorem of calculus* that for x in $[a, b]$:

$$\frac{d}{dx}\left(\int_a^x f(u)\,du\right) = f(x).$$