
Statistical Data Analysis

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1 BASIC PROBABILITY EXERCISES

$$\begin{aligned}(x+y)^3 &= (x+y)^2(x+y) \\ &= (x^2 + 2xy + y^2)(x+y) \\ &= (x^3 + 2x^2y + xy^2) + (x^2y + 2xy^2 + y^3) \\ &= x^3 + 3x^2y + 3xy^2 + y^3\end{aligned}\tag{1.1}$$

1.1 AXIOMS OF PROBABILITY

$$A = \begin{bmatrix} A_{11} & A_{21} \\ A_{21} & A_{22} \end{bmatrix}\tag{1.2}$$

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1.2 CONDITIONAL PROBABILITY

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2 POISSON DISTRIBUTION

3 DATA SUMMARIZATION AND CONFIDENCE INTERVALS

3.1

3.2

3.3

3.4

3.5

4 GAMMA DISTRIBUTION AND CONFIDENCE INTERVALS

4.1

4.2