

Related sections in the text

4.1, 4.2, 4.3, 4.4, 4.5 (read lightly)

Note, We will be discussing these sections again next week so don't be discouraged if the material seems difficult.

$\mathbb{Z} \downarrow \tilde{X} = \begin{pmatrix} X_1 \\ \vdots \\ X_M \end{pmatrix}$ is a counting rvec then the

pdf of \tilde{X} (or joint pdf of X_1, \dots, X_M)

$$G(\underline{z}) = G(z_1, \dots, z_M) = E(z_1^{X_1} \dots z_M^{X_M}) \\ = \sum_{\text{all } \underline{x}} z_1^{x_1} \dots z_M^{x_M} f(\underline{x})$$

where $f(\underline{x}) = P(\tilde{X} = \underline{x}) = P(X_1 = x_1, \dots, X_M = x_M)$ is the pdf of \tilde{X} (or the joint pdf of X_1, \dots, X_M).

Suggested problems

p60 #'s 3 (show the only if part & think about the other way), 4, 6

p65 #'s 1, 2, 3, 6

After next lecture Read p54#2, p57#5; p57#2, p60#2, p65#'s 4, 5