

Chapter 14: Basic Probability Rules

Legitimate Probability assignments. $0 \leq P(A) \leq 1$ for all A
 $P(S) = 1$ for S

$$P(A^c) = 1 - P(A)$$

A + B are Disjoint then $P(A \text{ or } B) = P(A) + P(B)$

A + B are Independent then $P(A \text{ and } B) = P(A)P(B)$
p. 379-383 : 11-15, 19-28, 31, 32, 35-37

Chapter 15: General Probability Rules

General Addition Rule $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
p. 404-408, 1-6

General Multiplication Rule $P(A \text{ and } B) = P(A) \times P(B|A)$
Tree diagram problems 33-40, 43, 44

Conditional probabilities $P(A|B) = \frac{P(A \text{ and } B)}{P(B)}$ 7-12

What is independent and what is disjoint.
or mutually exclusive.

Chapter 16: Random Variables

Expected Value (No Standard Deviation)

p. 427-431 : 1 + 2, 17a, 18a, 27a-d, 28a-d

Chapter 17: Binomial Distribution

Use Binom pdf for individual values

Use Binom cdf for summing up several values

$$\mu = np \quad \sigma = \sqrt{npq}$$

p. 447-450: 19 bdef, 21ab, 23a-c.