

MAT-CSC A67: Discrete Mathematics — Summer 2024

Quiz 11

Due Date: Monday, July 29, 11:59 PM, on Crowdmark

- Q1.** Suppose that A and B are events in a sample space S and that $\mathbb{P}(A)$, $\mathbb{P}(B)$ and $\mathbb{P}(A \mid B)$ are known. Show how to find a formula for $\mathbb{P}(A \mid \bar{B})$.
- Q2.** Suppose that 10 indistinguishable cookies are distributed randomly among 5 distinct children, what is the probability that every student get at least one cookie?
- Q3.** If n indistinguishable cookies are distributed randomly among 32 distinct children, what is the probability in terms of n that at least one student gets none?
- Q4.** What is the probability of rolling a six-sided fair die six times and having all numbers from 1 through 6 appear once (in any order)?