Stat 305 C - Exam 2 Topic Outline

1. Discrete random variables (Ch. 5.1)
    a. probability mass functions (pmf)
    b. cumulative distribution functions (cdf)
    c. expected value, variance, and standard deviation
    d. special discrete random variables:
        i. Binomial(n, p)
        ii. Geometric(p)
        iii. Poisson(λ)
2. Continuous random variables (Ch. 5.2)
    a. probability density functions (pdf)
    b. cumulative distribution functions (cdf)
    c. quantiles
    d. expected value, variance, and standard deviation
    e. special continuous random variables:
        i. Exponential(α)
        ii. Normal(μ, σ^2)
3. Joint distributions and independence (Ch. 5.4)
    a. Joint distributions (discrete random variables)
    b. Marginal distributions (discrete random variables)
    c. Conditional distributions (discrete random variables)
    d. Independence (discrete random variables)
4. Functions of several random variables (Ch. 5.5)
    a. Distributions of functions of random variables.
    b. Expectations and variances of linear combinations.
    c. The Central Limit Theorem