Stat 134: Section 5

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Conceptual Review

Please discuss these short questions with those around you in section. These problems are intended to highlight concepts from lecture that will be relevant for today's problems.

a. What is the meaning of $(N)_n$? What about $\binom{N}{n}$? What are the assumptions are we making when using these in counting?

b. When do we want to use the Hypergeometric distribution?

Problem 1

A cereal company advertises a prize in every box of its cereal. In fact, only about 95% of their boxes have prizes in them. If a family buys one box of this cereal every week for a year, estimate the chance that they will collect more than 45 prizes. What assumptions are you making?

  Ex 2.4.9 in Pitman's Probability

Problem 2

A deck of cards is shuffled and dealt to four players, with each receiving 13 cards. Find the probability that the first player holds all the aces given that she holds at least one.

 Ex 2.5.3 in Pitman's Probability