

Lecture 13

February 13, 2015

1. Try 13.5.69. Hint for part (c): Find the standard deviation and the range of values for X .
Hint for part (d): A hypergeometric is not a binomial distribution since if pick out the one refrigerator, it changes the proportion and thus the trials are not independent. However if the number of refrigerator is big (i.e. when $n/N < 0.05$) we can consider it as a binomial experiment. With a binomial experiment, we can use the cumulative binomial table.
2. Try 3.5.71. Hint for (b): Can you see that it is $P(X = 5) + P(X = 10)$.
3. Try 3.5.75.
4. Try 3.5.77. Hint: Let X_k be the number of male children born to the k -th brother and his wife (we computed $E(X_k)$ in 3.5.75). Do you see that $X = X_1 + X_2 + X_3$. What will happen to $E(X)$?