

Math 262 Reading Guide

Section 2.6.1

NAME _____

Read Section 2.6.1 and answer the following questions. *Hand in this worksheet at the next class.*

1. Consider the assumptions leading to the **hypergeometric distribution**. How are these similar to the assumptions leading to the binomial distribution? How are they different?

2. The hypergeometric distribution requires three parameters, which the text denotes N , M , and n . What do these parameters represent?

3. In Example 2.39, explain in your own words why $P(X = 2) = \frac{\binom{12}{2}\binom{8}{3}}{\binom{20}{5}}$.

4. Let X have a hypergeometric distribution with parameters N , M , and n .
 - (a) What is the formula for $P(X = x)$?

 - (b) What are the possible values of x ? (i.e. values that have nonzero probabilities)

 - (c) What are $E(X)$ and $\text{Var}(X)$?