Chapter 1:

* Definition 1.1 (mean of sample n):
* Definition 1.2 (Variance):
* Definition 1.3 (Standard Deviation):
  + Population of S.D:

Chapter 2:

* Distributive Laws:
* DeMorgan’s Law:
* Definition 2.6 (Probability):
  + Axiom 1:
  + Axiom 2:
  + Axiom 3:
* Corollaries of Axioms (From class):
* Multinomial Coefficients:
* Theorem 2.2 (Permutations):
* Theorem 2.3 (Partitioning distinct objects):
* Theorem 2.4 (Combinations):
* Definition 2.9 (Conditional Probability):
* Definition 2.10 (Independent):
* Theorem 2.5 (Multiplicative Law of Probability):
  + Intersection:
  + If A and B are Independent:
* Theorem 2.6 (Additive Law of Probability):
  + Probability of union:
  + Exclusive Events:
* Theorem 2.7 (Events):
* Theorem 2.8 (Law of Total Probability):
* Theorem 2.9 (Bayes’ Rule):

Chapter 3

* Theorem 3.1 (Discrete Probability):
* Discrete Random Variables (From class):
* Probability Mass Function (From class):
  + if
* Definition 3.4 (Expected Value):
* Theorem 3.2:
* Definition 3.5 (Variance):
* Theorem 3.4:
* Theorem 3.6 (Variance):
* Standard Deviation:
* Definition 3.7 (Binomial Probability):
* Theorem 3.7 (Standard Deviation and Variance for Binomial Probability):
* Definition 3.8 (Geometric Probability Distribution):
* Theorem 3.8 (Standard Deviation and Variance for Geometric Probability):
* Definition 3.9 (Negative Binomial Probability Distribution):
* Theorem 3.9 (Standard Deviation and Variance for Negative Binomial Probability):
* Definition 3.10 (Hypergeometric Probability Distribution):
* Theorem 3.10 (Standard Deviation and Variance for Hypergeometric Probability):
* Definition 3.11 (Poisson Probability Distribution):
* Theorem 3.11 (Standard Deviation and Variance for Poisson Probability):
* Definition 3.14 (Moment-Generating Function):
* Theorem 3.12:
* Definition 3.15 (Probability-Generating Function):
* Definition 3.16 (Factorial Moment):
* Theorem 3.13:
* Theorem 3.14 (Tchebysheff’s Theorem):
  + **OR**