

Instructions: Exam 2 is going to contain a mix of free response questions, fill in the blank and multiple choice questions. It will be on **Wednesday, October 16th during class time**. You will be allowed to use a two page summary sheet(front and back) and your calculator. You will turn in the summary with the exam.

In preparation for the exam, you may wish to do the following:

- Review the concepts learned in each section and as you go, make your own one page summary. This will help you have all the things you need to remember in one place.
- Review the exercises used as examples during the lectures.
- Review problems from the homeworks.
- Go over this Study Guide and fill in any formulas and make sure all the concepts/formulas look familiar and you know when/how to use them.
- Finally, after you have studied, take the practice exam. This assignment is not required. It is there for you to use as practice after you have studied. Do not use the Practice as your only preparation for the Exam; use it as a study tool.

Exam 2 will cover Chapter 3, Sections 3.2 and 3.3, and Chapter 4.

1. Chapter 3

Know definitions and formulas for the following concepts:

- Range
- Standard deviation
 - (a) σ
 - (b) S
- Variance
- How to find standard deviation of Grouped Frequency Distribution
- What is a z score and formula for it.
- Empirical Rule

- Quartiles
- 5-number summary
- Boxplot
- How to find outliers

2. Chapter 4

- Definitions and examples of experiments, outcomes, sample space, events,
- Classical versus empirical probability
- Know how to find probabilities of simple events
- Know how to find probabilities of complex events involving **or**; using Venn diagrams.
- Know how to find conditional probabilities
- Know how to find probabilities of complex events involving **and**; using tree diagrams
- Know how to use the Fundamental Principle of counting for various types of problems, including factorial notation
- Know how to differentiate between Permutations and Combinations.
- Bonus question: Formula and use of Permutations and Combinations (we will go over it on Monday)