**AP Exam Review**

**2017**



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**AP Statistics Exam Review - Daily Routine**

**For homework**, you will complete **20 multiple-choice questions per night**. I expect you to first attempt to complete the questions without any resources. If you cannot answer a question without other resources, then I want you to make every effort to answer the question using whatever resources you feel necessary. This includes your text, notes, classmates, internet resources, etc. I want you to **attack** these problems with a **vengeance**. We will continue to begin class every day by going over homework, however, it is imperative that you work every problem.

**For each multiple-choice question**, I want you to:

* Show work completely and logically;
* Name the “philosophy of the question”;
* List any significant definitions, tests, etc. that were used to solve the problem;
* Give outside sources if used (be specific);
* Make notes on your “Hit List” and “Cheat Sheet” as necessary.

Additionally, I want you to **take time nightly to work on your weaknesses**. This is where the “Hit List” comes into play. This might be in the form of going back to the text, your notes, or other resources and reinforcing old material. It might also take the form of doing old homework problems over again. This is the **most important** part of the exam review. It will be entirely upon you to identify and work your weaknesses. If you master this approach, you will be highly successful.

**For class work**, we will work free-response questions in teams. When completing them, I expect you to write your responses as if you were actually taking the exam. This means on a separate piece of paper. I want you to attempt to answer the questions without outside sources and I want you to keep in mind the time limits that will be imposed during the actual exam as you work them. **For each free-response** **question**, I want you to do the same things I listed above for the multiple-choice questions.

I also plan on having **mini-lessons** on topics as needs arise. Your input in this regard is very valuable. Again, your “Hit Lists” will be helpful to identify the weaknesses we need to revisit.

**Other Considerations**

* You should be going back to “Notes to Accompany.” I think you will find that the information will make sense to you now that we have gone through all of the material.
	+ Look at AP Exam Tips in each chapter.
* Look back at exams and special problems.
* Use your portfolios.

**About the AP Statistics Exam - May 11, 2017 at 12:00 Noon**

The exam is approximately three hours long and has two parts – multiple choice and free response. Each section of the exam is worth 50% of the final exam grade.

The portion of the exam covering each course topic area is:

* Exploring Data: Describing patterns and departures from patterns (20%–30%)
* Sampling and Experimentation: Planning and conducting a study (10%–15%)
* Anticipating Patterns: Exploring random phenomena using probability and simulation (20%–30%)
* Statistical Inference: Estimating population parameters and testing hypotheses (30%–40%)

**Section I: Multiple Choice** — 40 questions; 1 hour and 30 minutes

The multiple choice questions will cover the topics listed above.

Total scores on the multiple-choice section are based on the number of questions answered correctly. Points are not deducted for incorrect answers and no points are awarded for unanswered questions.

**Section II: Free Response** — 6 questions; 1 hour and 30 minutes

* 5 questions asking you to relate two or more different content areas through a response or solution to a statistics or probability problem.
	+ 75% of Part II
	+ 65 minutes
* Investigative task asking you to demonstrate your understanding of a variety of topics, and your ability to integrate statistical ideas and apply them in a new context or an unusual way.
	+ 25% of Part II
	+ 25 minutes

You'll need to bring a graphing calculator with statistical capabilities to the exam.

Do problem 1 first then do problem 6.

**Exam Tips**

The following strategies were developed by faculty consultants to help you on exam day:

* The Multiple Choice Section is worth 50% of your overall grade. You are given 90 minutes to answer 40 questions.
* There is no penalty for incorrect answers.
* Before beginning to solve the free-response questions, it is a good idea to read all 6 questions to determine which ones you feel most prepared to answer.
* The first 5 questions are shorter and should take 10-15 minutes each. The 6th and final question is called the investigative task. It is worth 25% of the free response section and usually takes 25-30 minutes to complete. The question usually has a “flow” (meaning the parts are connected) and almost always asks the students to do something new. Do not save this question until the end of the exam, as you will be too tired and rushed to think creatively. *A good strategy is to complete question 1, then question 6, then the remaining 4 questions*.
* Show **all** your work; partial credit is given for partial solutions to problems. If the answer is not correct, you are not likely to receive credit for correct thinking if the person scoring the examination does not see evidence of this process on paper. If you do work that you think is incorrect, simply put an "X" through it, instead of spending time erasing it completely.
* Organize your answers as clearly and neatly as possible, showing the steps you took to reach your solution. If the faculty consultants cannot easily follow your reasoning, you are less likely to receive credit for it.
* You should **not** use the "scattershot" approach: i.e., write a bunch of equations hoping that the correct one will be among them so that you can get partial credit. In such cases, faculty consultants may well deduct points for the extraneous or incorrect information.
* Communication is very important. Make sure the faculty consultant knows what you are doing and why. Explain your reasoning. When asked to choose between several options, give reasons for your choice AND reasons why you did not choose the others.
* Do not use statistical vocabulary unless you use it correctly. Define all symbols, draw pictures, etc. Never just give a numerical answer without showing how you found it and why.
* Do not rely on calculator syntax. If you write down calculator syntax, clearly label each number.
* When you are asked to compare two distributions, use explicit comparison phrases such as “higher than” or “approximately the same as.” Lists of characteristics do not count as a comparison.
* Do not give 2 different solutions to a problem. The worst one will be graded.
* Answer all questions in the context of the problem.
* If the question asks you to use results from previous parts of the question, make sure you explicitly refer to them in your answer.
* If you cannot get an answer for an early part of a question but need it for a later part, make up a value or carefully explain what you would do if you knew the answer.
* Space on the exam is not suggestive of the desired length of an answer. The best answers are usually quite succinct. There is no need for “extra fluff” on an AP Statistics exam.
* Interpreting a value includes *giving* the value.
* When drawing a graph, make sure you include labels and scales.
* Naming is not enough for description. For example, if you are asked to describe a bias in a survey do not merely name the type. Give what effect it could have.
* Don’t automatically enter data into your calculator before reading the entire question. In most cases, you will not need to enter the data.
* Use words like “approximately” liberally, especially with the word “Normal.”
* Bring a watch to help pace yourself. Bring an extra calculator, or at least extra batteries and an extra pencil.
* You will be provided formulas and tables (normal, t, chi-square) on both sections.
* Do NOT bring a cell phone or any other communication device.
* You may not use rulers, white-out or highlighters.
* You may not discuss the multiple choice questions (ever) and may not discuss the free response questions until they are released on AP Central (not all free response questions will be released).
* You may not have any programs on your calculator except those which upgrade its capabilities to match newer calculators. For example, you may have a program to do inverse-t but not one that lists conditions.

**AP Statistics “Hit List”**

**AP Statistics “Cheat Sheet”**