

Preparing for the AP Statistics Exam

The Multiple Choice Section:

- Worth 50% of your overall grade.
- 40 questions in 90 minutes (there is usually enough time for this section).
- There is no penalty for wrong answers, so ANSWER EVERY QUESTION!
- Generally the questions get harder as you go.
- Skip tough questions and return to them later.

The Free Response Section:

- Worth 50% of your overall grade.
- 6 questions in 90 minutes (students usually feel rushed on this section).
- 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 portion and usually takes 25-30 minutes. The question usually has a “flow” (meaning the parts are connected) and almost always asks the students to do something new. Don’t save it until the end of the exam, you will be too tired and rushed to think creatively.
- A good strategy is to do question 1, then question 6, then the remaining 4 questions. Read each question first so you can get the big picture and prioritize your time.
- Communication is very important. Make sure the grader knows what you are doing and why. Don’t use statistical vocabulary unless you use it correctly. Define all symbols, draw pictures, etc. Never just give a numerical answer.
- Don’t just rely on calculator commands. If you use calculator commands, clearly label each number.
- Explain your reasoning. When asked to choose between several options, give reasons for your choice AND reasons why you did not choose the others.
- 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.
- Don’t waste time erasing. Cross out wrong answers and draw arrows to help the reader follow your work.
- Don’t 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 Stats exam.
- Don’t automatically enter data into your calculator. In most cases, you will not need to.
- Use words like “approximately” liberally, especially with the word “Normal.”

Other Stuff:

- 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 FR questions will be released).
- You sure to review computer output and the formula sheets.
- The AP Exam is harder than a normal classroom test. Scoring at least 40% will almost guarantee a 3 or higher on the exam. Don’t panic if you cannot answer a question or two.
- 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.

The table below lists the 15 different inference procedures you should know for the AP exam. In each of the scenarios below, choose the correct inference procedure.

One-sample z interval for p	One-sample z test for p
One-sample t interval for μ , including paired data	One-sample t test for μ , including paired data
Two-sample z interval for $p_1 - p_2$	Two-sample z test for $p_1 - p_2$
Two-sample t interval for $\mu_1 - \mu_2$	Two-sample t test for $\mu_1 - \mu_2$
t interval for the slope of a least-squares regression line	t test for the slope of a least-squares regression line
	Chi-square test for goodness-of-fit
	Chi-square test for homogeneity
	Chi-square test for association/independence

- Which brand of AA batteries last longer—Duracell or Eveready?
- According to a recent survey, a typical teenager has 38 contacts stored in his/her cellphone. Is this true at your school?
- What percent of students at your school have a Facebook?
- Is there a relationship between the age of a student's car and the mileage reading on the odometer at a large university?
- Is there a relationship between students' favorite academic subject and preferred type of music at a large high school?
- Who is more likely to own an iPod—middle school girls or middle school boys?
- How long do teens typically spend brushing their teeth?
- Are the colors equally distributed in Fruit Loops?
- Which brand of razor gives a closer shave? To answer this question, researchers recruited 25 men to shave one side of their face with Razor A and the other side with Razor B.
- How much more effective is exercise and drug treatment than drug treatment alone at reducing the incidence of heart attacks among men aged 65 and older?