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The AP® Physics 1 Exam is a college-level exam administered every year in May upon the completion of an Advanced Placement Physics 1 course taken at your high school. If you score high enough, your AP Physics score could earn you college credit! Check out our AP Physics 1 Guide for the essential info you need about the exam: What's on the AP Physics 1 exam? The College Board is very detailed in what they require your AP teacher to cover in your AP Physics 1 course. They explain that you should be familiar with the following topics: Kinematics Dynamics Circular Motion and Gravitation Energy Momentum Simple Harmonic Motion Torque and Rotational Motion Read More: Review for the exam with our AP Physics 1 Crash Course What's the difference between AP Physics 1, 2, and C? AP Physics 1 is the equivalent of the first semester of an introductory college-level course on algebra-based physics, covering the topics of Newtonian mechanics; work, energy, and power. AP Physics 2 is the equivalent of the second semester in the college-level introductory course, covering the topics of fluid mechanics; thermodynamics; electricity and magnetism; optics; and quantum, atomic, and nuclear physics. AP Physics C: Mechanics and AP Physics C: Electricity and Magnetism are each equivalent to college-level courses in calculus-based physics. For a comprehensive content review, check out our book, AP Physics 1 AP Physics 1 Sections & Question Types The AP Physics 1 exam is three hours long and consists of two sections: a multiple-choice section and a free-response section. AP Physics 1 Section Timing Number of Questions Multiple Choice 90 minutes 45 single-select; discrete questions and questions in sets with one correct answer 5 multi-select; discrete questions with two correct answers Free Response 90 minutes 1 experimental design 1 qualitative/quantitative Translation 3 short answer (requiring a paragraph-length argument) TOTAL: 3 hours 55 questions Note: The College Board has not yet announced if the 2021 digital version of the AP Physics 1 exam will be in place for future exam years. For updates on the digital test and its format, please visit the AP Physics 1 page on the College Board's website . AP Physics 1 Multiple-Choice Single-select questions are each followed by four possible responses, only one of which is correct. Multi-select questions require two of the listed answer choices to be selected to answer the question correctly. AP Physics 1 Free Response Questions The free response section consists of five multi-part questions, which require you to write out your solutions, showing your work. Unlike the multiple-choice section, which is scored by a computer, the free-response section is graded by high school and college teachers. They have guidelines for awarding partial credit, so you may still receive partial points should you not correctly respond to every part of the question. Can you use a calculator on the AP Physics exam? You are allowed to use a calculator on the entire AP Physics 1 Exam—including both the multiple-choice and free-response sections. Scientific or graphing calculators may be used provided that they don't have any unapproved features or capabilities (a list of approved graphing calculators is available on the College Board's website). What's on the AP Physics 1 equation sheet? A table of equations commonly used in physics will be provided to you at the exam site. Check out what the AP Physics 1 formula sheet looks like here . How is AP Physics 1 scored? AP scores are reported from 1 to 5. Colleges are generally looking for 4 or 5 on the AP Physics 1 exam, but some may grant credit for a 3. Here's how students scored on the May 2022 test: AP Physics 1 Score Meaning Percentage of Test Takers 5 Extremely qualified 7.9% 4 Well qualified 17.0% 3 Qualified 27.1% 1 No recommendation 29.6% Score: College Board Each test is curved so scores vary from year to year, but as we see above, in May 2022 around 50% of test takers earned scores of 1 or 2. You'll want to study hard and prepare for this tough exam. How can I prepare? AP classes are great, but most students don't have them. For a group-level review of AP Physics 1 content and strategy, check out the prep options for AP Physics 1 students. Families have invested in AP Physics 1 students and their high school. We also offer AP classes and help by giving the resources for after school, before test, college and study sessions. Follow us on Twitter @TheCollegeBoard . The AP Physics 1 course is organized into 7 topics: Introduction to Physics, Kinematics, Dynamics, Work and Energy, Momentum and Collisions, Rotational Motion, Oscillations, and Waves. The AP Physics 1 exam is divided into two sections: a multiple-choice (50 questions, 1 hour 30 minutes) and free-response (5 questions, 90 minutes). The mean score for the AP Physics 1 exam in 2022 was 3.02 out of 5. This is higher than the mean score for all AP subjects in 2022, which was 2.92. The passing rate for the AP Physics 1 Exam for 2022 was 43.3%. This is lower than the pass rate for AP overall. With AP Physics 1, some majors that you could choose from include engineering, physicist, and mathematician. If you're a high school student getting ready for the AP Physics 1 exam and feeling daunted by the exam's scope and format, this blog is for you. According to surveyed data of class alumnae, the pass rate for the AP Physics 1 exam was 43.3% in 2022 which is lower than the average AP exam pass rate of 60%. The difficulty rating for the AP Physics 1 exam was 7.7 out of 10. This blog will provide a comprehensive guide on how to prepare and excel on the exam. We'll cover all the necessary exam details, including timing and structure, and teach you the key concepts and formulas you'll need to master. Get started with your AP Physics 1 Exam prep and act it with our resources! Looking for last minute help for your AP Physics 1 exam in May? Find an expert 1-on-1 online AP Physics 1 tutor from Wizingy and give your exam prep a boost! The AP Physics 1 exam is a standardized test, administered by the College Board to high school students who have completed a one-year introductory course in algebra-based physics. The exam covers topics such as kinematics, dynamics, energy, momentum, simple harmonic motion, and torque and rotational motion and consists of multiple-choice and free-response questions that assess students' knowledge, reasoning, and problem-solving skills. The AP Physics 1 exam is important for several reasons. First, it allows students to earn college credit and/or placement in physics courses, which can save them time and money in college. Second, it provides a measure of students' mastery of fundamental physics concepts and skills, which are essential for success in many STEM fields. Finally, it is a recognized credential that can enhance students' college applications and career prospects. The AP Physics 1 exam consists of two sections: a multiple-choice section and a free-response section. SectionType of QuestionNo. of QuestionTime LimitMultiple-choice questionsSingle-select (45 questions) and multiple-select (5 questions)5/090 minsFree-response questionsExperimental design 1 questionQualitative/quantitative translation 1 questionShort answers (3 questions)5/90 minsAP Physics 1 Exam formatAP Physics 1 Exam Guide The multiple-choice section consists of 50 questions and lasts 90 minutes. The questions are divided into two types: discrete questions and question sets. The free-response section consists of five questions and lasts 90 minutes. The AP Physics 1 exam is 3 hours long. Section 1 of the AP Physics 1 exam is 1 hour and 30 minutes long. This section consists of 50 multiple-choice questions and holds a weightage of 50% in the score distribution. Section 2 of the AP Physics 1 exam is 1 hour and 30 minutes long. This section consists of 5 free-response questions and holds a weightage of 50% in the score distribution. Five "big ideas" of physics, which include fundamental scientific concepts, theories, and procedures, serve as the basis for AP Physics 1. The AP Physics 1 test covers the following five big ideas: Big Idea 1: Objects and systems have properties such as mass and charge. Systems may have internal structures. Big Idea 2: Fields existing in space can be used to explain interactions. Big Idea 3: The interactions of an object with other objects can be described by forces. Big Idea 4: Interactions between systems can result in changes on both systems. Big Idea 5: Changes that occur as a result of interactions are constrained by conservation laws. Units coveredExam weightage (Multiple-choice section)Unit 1: Kinematics12-18%Unit 2: Dynamics16-20%Unit 3: Circular motion and gravitation8-8%Unit 4: Energy20-28%Unit 5: Momentum12-18%Unit 6: Simple Harmonic Motion4-6%Unit 7: Torque and Rotational Motion12-18%Topics covered in AP Physics 1 Source: College Board NOTE: According to the College Board, the AP Physics 1 exam will only cover the content from Units 1 through 7. Because the AP Physics 2 exam already incorporates the topics from earlier Units 8, 9, and 10, the same topics will not be included in the AP Physics 1 exam. This modification was initially introduced for the 2021 exam cycle and will remain as permanent. The AP Physics 1 exam for the year 2025 will be held on Friday, May 16, at 8:00 AM local time. The AP Physics 1 exam is administered at schools or testing centers designated by the College Board. To register for the AP Physics 1 exam, students must enroll in the corresponding AP course at their high school and then register for the exam through their AP coordinator. The registration deadline is typically in the spring, but students should check with their AP coordinators for the specific deadline at their school. There is a fee associated with taking the exam, but fee reductions or waivers may be available for students with financial needs. Is the AP Physics 1 exam hard? According to a survey, the AP Physics 1 course is considered very hard by former students, with a difficulty rating of 7.2 out of 10. Despite this, it remains a popular course with over 137,000 entries in 2021 and 144,000 entries in 2022. The course is challenging due to its focus on college-level physics concepts and the need for a strong understanding of algebra, which not all high school students possess. Additionally, the exam consists of both multiple-choice and free-response questions, which require different problem-solving skills. Despite the difficulty, 80% of students who have taken the course would recommend it to others. Success in the course requires a significant amount of hard work and dedication, but it can be highly rewarding for those who are willing to put in the effort. Discover how private tutoring can transform your preparation and help you excel in science-related subjects, including AP Physics 1. Read more in our blog: Achieving Better Grades in Science with Private Tutoring. To ace the AP Physics 1 exam, you need to have a solid understanding of the key concepts and formulas that are covered in the course. Some of the key topics you should focus on include: Kinematics: Motion in one and two dimensions, velocity, acceleration, and displacement. Forces: Newton's laws of motion, friction, circular motion, and centripetal force. Energy: Work, kinetic and potential energy, conservation of energy, and power. Momentum: Impulse, conservation of momentum, and collisions. To master these concepts, you should review your class notes and textbook, and work through practice problems and sample questions. The more you practice the problems, the better you will be prepared for the exam. In addition to reviewing the content, it's important to develop a strategy for tackling the free-response section of the exam. Here are some tips: Take on the "easiest" question after reading through all 5 FRQs. Make sure you understand what the question is asking before you start answering it. Read the entire question and underline key phrases or concepts. Utilize the first question to boost your self-assurance and get you through a challenging portion. Explain your responses in detail to support them. The free-response section of the exam requires you to show your work and explain your reasoning. Make sure you write out all the steps you take to solve the problem and explain your thought process. Label your diagrams properly Draw clear, labeled diagrams to help you visualize the problem and communicate your solution. Check your work twice before submitting. Before you submit your answers, double-check your calculations and make sure you've answered the question correctly. Remember to pace yourself during the exam. The AP Physics 1 exam is three hours long and consists of multiple-choice and free-response sections. You have about 90 seconds per multiple-choice question and about 12 minutes per free-response question. Use your time wisely and don't spend too much time on any one question. In 2022, only 7.9% of the 144,526 students who took the AP Physics 1 exam scored a 5. While 3 is considered the unofficial passing rate, most elite universities, such as Harvard or Princeton, offer AP credit only if you score 5 or higher. Getting a 5 is possible if you have the right support in your high school, but that's rarely the case. Here at Wizingy, we work with vetted AP Physics 1 tutors with demonstrated expertise and experience in helping students score a 5 on AP exams. Unlike tutor marketplaces, every Wizingy tutor is screened individually and undergoes a comprehensive assessment. Less than 3% of applicants are selected to become tutors on Wizingy's platform, ensuring tutors are highly qualified and experienced in teaching AP courses. Our online tutors will work with you 1-on-1 to master the content and skills you need to succeed. Experienced tutors can provide you with curriculum-specific guides and practice questions and familiarize you with the exam format to help you ace the test. We know that sometimes you don't want to pay for private tutoring because it's too expensive. It's common to see tutoring costs between \$100 to \$150 per hour. Wizingy's rates are affordable, starting from just \$28 per hour, much lower than the average AP tutoring offered by other platforms. One more advantage of studying with us is that we don't require you to sign up for any packages or yearly subscriptions. You can sign up for as little as one lesson and add more lessons as per your requirements. While we try to match you with the perfect tutor as per your needs, we know that sometimes even the best tutors might not be the right fit for you. That's why we offer you the Perfect Match Guarantee, which means that if you are not satisfied with your tutor for any reason, you can request a free replacement at any time. Sign up with Wizingy AP Physics 1 Tutoring today and achieve your goal of scoring a 5 on your AP Test! In conclusion, the AP Physics 1 exam covers essential topics such as kinematics, dynamics, energy, momentum, simple harmonic motion, and torque and rotational motion. The AP Physics 1 exam holds significant importance for several reasons. In 2020, the pass rate for the exam was 61.4%, which decreased to 55.7% in 2022. Similarly, the mean score for AP Calculus AB was 3.07 in 2020 and 2.91 in 2022, indicating the challenges faced by students. Despite AP Physics 1's difficulty, with a difficulty rating of 5.5 out of 10, the exam remains popular, with over 137,000 entries in 2021 and 144,000 entries in 2022. The AP Physics 1 exam holds significant importance as it offers the opportunity to earn college credit or advanced placement, showcases mastery of fundamental physics concepts, and enhances college applications and career prospects. Best of luck on your journey toward acing the AP Physics 1 exam! Looking for last minute help for your AP Physics 1 exam? Find an expert 1-on-1 online AP Physics 1 tutor from Wizingy and give your exam prep a boost! The AP Physics 1 exam consists of a total of 55 questions: 50 multiple-choice questions and 5 free-response questions. The AP Physics 1 exam is administered by the College Board every year in the month of May. Passing this exam marks the completion of the AP Physics 1 course. The test includes topics such as kinematics, dynamics, energy, and momentum. As of 2023, the cost of taking the AP Physics 1 test in the United States is \$95 per exam. Nevertheless, the price may differ for students from other countries and for those who qualify for free exemptions or discounts. 70% of the AP Physics 1 exam is conceptual questions and 25% is problem-solving. The memorization of such a broad range of topics, complex concepts, and the need to apply knowledge to solve problems, is what makes the AP Physics 1 exam so challenging. The free-response part of the exam is the final part of the exam, which is the free-response section, which lasts for one hour and 30 minutes and accounts for that 50% of your score. The section is divided into five questions: Experimental Design, Question, Assessing your ability to design or describe a scientific investigation, analyze authentic laboratory data, and identify patterns or trends in phenomena. Qualitative/Quantitative Translation: Assesses your ability to translate between quantitative and qualitative data, and reasoning Paragraph Argument: Assesses your ability to create a paragraph-length response consisting of a coherent argument about a physics phenomenon that uses the information presented in the question and proceeds in a logical, expository fashion to arrive at a conclusion (2) Short-Answer Questions: Two short-answer questions that focus on practices and learning objectives not highlighted in the other question types. The first two questions (experimental design and qualitative/quantitative translation) are weighted heavier than the three short-answer questions. Experimental design and qualitative/quantitative translation are both 12 point questions, while the short-answer questions are worth 6 points each. Example of a qualitative/quantitative translation free-response question: Source: College Board, Example of a paragraph-argument, short-answer, free-response question: Source: College Board, You are expected to bring and use a four-function graphing or scientific calculator on the exam. You should be familiar with your calculator, and it's a good idea to bring extra batteries. Sharing calculators during the exam is not allowed, but you may bring up to two calculators. You can find the complete calculator policy and a list of acceptable models on the College Board website. 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and the elements that make up a full-credit answer. This knowledge will allow you to understand the level of detail and specificity the graders seek. The Chief Reader Reports might be the most valuable reports of the ones listed above. These reports are written by the Chief Reader for the AP® Physics 1 exam, who is usually a college professor and someone who is considered an expert in the field of teaching physics. This report will break down each free-response question and point out where students did well or lacked answers. The report also outlines areas students should pay particular attention to when studying in order to answer the questions properly. The Chief Reader Report for 2019 noted that in the responses for question 3, many students did not understand how the measured variables corresponded to the variables in their mathematical expressions. They were too vague in reference to their measured variables. Another useful tool that isn't listed above is the list of sample responses that are available for each past exam question. These reports show three separate sample responses for each question. For the 2019 exam, of the 7 possible points for Question 1, one response earned 6 points, one earned 4 points and one only earned two points. You can view all of the responses and a breakdown of why they missed points. You will undoubtedly want to spend a large portion of your time studying for the free-response portion of the exam, but don't forget the multiple-choice portion as well. Albert's AP® Physics 1 exam page can save you time and energy and quickly get you up to speed on this section. There you will find hundreds of multiple-choice practice questions specifically designed for the AP® Physics 1 exam. Return to the Table of Contents AP® Physics 1 is considered an introductory physics course, so it is a good choice for a variety of students. On the one hand, it is a good early course for students who are either starting their physics education or plan to go on to either of the AP® Physics C courses. On the other hand, it is also a good course for students who want to take a challenging AP® science course but don't necessarily want to major in science or engineering in college. Students who fall into this category typically choose to take the course later in high school. AP® Physics 1 will cover both text-based work and hands-on laboratory work. Students in this class will learn about systems, fields, force interactions, change, conservation, and waves. If these topics interest you and you have taken Algebra II, you would be a good candidate to take AP® Physics 1. You can learn more about the content of the AP® Physics 1 course in the course overview. Since you are not required to take AP® Physics 1, you will want to explore other AP® courses to make sure that AP® Physics 1 is the right course for you. If the subject matter does not align with your interests and strengths, you should choose a different AP® course that interests you. If scoring a 5 on your AP® exams is a goal, you will want to approach AP® Physics 1 with caution. This course has one of the lowest percentages of science students who scored a 5 to 24.10.2%. The overall passing rate is also the lowest, at 47.3%. You have full control over which AP® courses you choose to take. Review the AP® course options with your guidance counselor, teachers, and parents to design an AP® course plan that works best for you. As the AP® Physics 1 exam is one of the most difficult exams in terms of content and passing rates, the scores tend to trend lower than with some other AP® exams. Your score on this exam will be based on such factors as your aptitude for physics and your level of preparation for the exam. You might find the scoring breakdowns on the chart below helpful as you determine your likelihood to be successful on the AP® Physics exam. 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