

Intro to the ACT®



The ACT

What You Need to Know

The ACT is a stressful part of the college admissions process that almost no one enjoys but many have to do. There's a lot of information swirling around out there that doesn't always help relieve the anxiety—some of the things you'll hear will actually stress you out more! Let's talk through a few things that will help you feel more prepared for test day.

ACT Testing Dates, Fall 2020

- September 12th
- September 13th
- September 19th
- October 10th
- October 17th
- October 24th
- October 25th
- December 12th

Dates are subject to change.

- Click [here](#) to learn more about the latest testing schedule and updates from ACT.

What is the ACT and why do I have to take it?

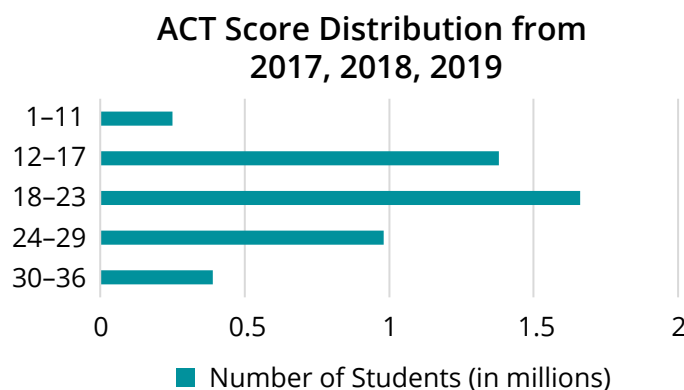
- The ACT is a college admissions test administered by ACT, Inc that has historically been administered seven times a year. The company is in the process of adding more dates throughout the year, beginning in September 2020.
- The ACT tests your grammar and editing skills, math knowledge, reading comprehension, and science reasoning abilities.
- The ACT allows college admissions offices to compare students from a variety of schools and locations. GPAs and course loads aren't always a perfect comparison tool, because knowing that a student has a 4.2 GPA doesn't tell you much without knowing how many honors/AP® classes she took, how many advanced classes were available at the school, the student's individual grades, etc. It is very easy, on the other hand, to compare a student who got a 25 on the ACT to the other 2 million students who took the ACT that year.

What does “test-optional” mean? Should I still take the test?

- “Test-optional” means that you are not required to submit an SAT or ACT score for admission to a college. This is different from “test-blind,” which means that colleges will not even consider your scores, no matter how good or bad they are. Many colleges have announced new test-optional policies in response to the Covid-19 pandemic, while a few have announced a test-blind policy. It’s important to remember that individual colleges make their own policies and can revise them at any time, so it’s important to check the details on the college’s website for accurate information. Also, some colleges still require the SAT or ACT for homeschool students, international students, or student athletes. Make sure you understand the fine print on their test-optional policy.
- Whether you should take the test depends on these policies and whether the exam will help or hurt your application. If your final exam score is higher than the college’s average score, then your score could be an asset to your application. Also, if you earned low grades in 9th or 10th grade, then a high SAT or ACT score can help support your application. But remember that “test-optional” means that submitting an exam is literally an option for you.

I do well in school—why does this test feel like such a problem for me?

- This test *feels* like it should be like any other English, Math, or Science test you've ever taken. You're probably pretty good at taking tests in school, so you feel like you should be good at the ACT. But the ACT doesn't exactly play by the same rules your English teacher or Math teacher uses to write tests, so it feels more stressful.
- It's fairly common for students to get their scores back from a standardized test and wonder why those scores don't quite seem to match their grades in school.
- ACT is very good at writing tests that give score distributions with the highest percentage of students scoring around the average score, some who do a little better or a little worse, and a few outliers who do really well or really poorly. Take a look at this score distribution of 5.7 million test scores from the past three years:



- That distribution is not an accident. When you get your scores back and you didn't do as well as you had expected, it's *not* an automatic indicator that you're not smart or that you're a bad student: you just performed the way ACT wanted you to in order to keep that nice curve.

Okay, great. Now I'm even more stressed out. I thought you said you were going to *help* with the stress, not make it worse!

- Don't panic! There's lots of good news here. This test is stressful, but it's also quite straightforward to prepare for it.
- First, consider what happens when you tell someone you got a 23 on the ACT. There's no follow-up question of, "Yes, but was that in February or in *October*?" because (theoretically) the test is the same type of test over and over, seven times a year. If you familiarize yourself with how the test is written and then practice it, on test day, you'll find yourself facing a very familiar test.
- Second, the ACT asks the same types of questions on every test. The test writers have to write multiple tests every year, and all those questions have to give similar results in order to keep the scores valid. ACT can't get creative because then the scores wouldn't be comparable. Don't worry about cramming content for this test- worry about learning the structure of the test, the question types, and strategies for those types instead.
- For example, don't worry about studying your old Biology notes and Chemistry labs to prepare for the Science test. Instead, use your time to practice reading ACT Science charts and graphs. Look for trends and relationships rather than trying to become an expert on the science content.

Here are some formulas you should know for ACT Math.

Area of a triangle:

$$A = \frac{1}{2}bh$$

Pythagorean theorem:

$$a^2 + b^2 = c^2$$

Area of a square with side s :

$$A = s^2$$

Perimeter of a square with side s :

$$P = 4s$$

Area of a rectangle with sides l and w :

$$A = lw$$

Perimeter of a rectangle with sides l and w :

$$P = 2l + 2w$$

Area of a parallelogram:

$$A = bh$$

Area of a trapezoid:

$$A = \frac{b_1 + b_2}{2}h$$

Area of a circle:

$$A = \pi r^2$$

Circumference of a circle:

$$C = 2\pi r$$

Arc length of a circle:

$$\text{Arc length} = \text{degrees} \cdot \frac{\pi r}{180}$$

Volume of a cube:

$$V = s^3$$

Surface area of a cube:

$$SA = 6s^2$$

Volume of a rectangular solid:

$$V = lwh$$

Surface area of a rectangular solid:

$$A = 2lw + 2lh + 2wh$$

Volume of a sphere:

$$V = \frac{4}{3}\pi r^3$$

Surface area of a sphere:

$$SA = 4\pi r^2$$

Volume of a cylinder:

$$V = \pi r^2 h$$

Volume of a cone:

$$V = \frac{1}{3}\pi r^2 h$$

Midpoint formula:

$$\text{Midpoint} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

Distance formula:

$$\text{Distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Slope formula:

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

Axis of symmetry of a parabola:

$$x = -\frac{b}{2a}$$

Graph of a circle centered at (h, k) with a radius of r :

$$(x - h)^2 + (y - k)^2 = r^2$$

Graph of an ellipse centered at (h, k) with width $2a$ and height $2b$:

$$\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = 1$$

Graph of a hyperbola:

$$\frac{(x - h)^2}{a^2} - \frac{(y - k)^2}{b^2} = 1$$

Quadratic Formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Law of Sines

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

Law of Cosines

$$c^2 = a^2 + b^2 - 2ab \cos C$$

Probability

$$\frac{\text{Desired Outcome}}{\text{All Possible Outcomes}}$$

Growth Rate Formula

$$\text{Final} = \text{original} (1 \pm \text{rate})^{\text{number of changes}}$$

Step 1: Learn the structure

The test will always be constructed in the same order with the same types of content:

Content Type	#Questions/ Time	Description
English	75 questions/ 45 minutes	Passage-based editing
		Usage & Mechanics (grammar and punctuation)
		Rhetorical Skills (editing and flow)
Math	60 questions/ 60 minutes	Word problems and problem solving
		Arithmetic
		Algebra I & II
Reading	40 questions/ 35 minutes	Geometry & Trig
		Passage-based reading comprehension
		4 passages: Literature, Social Science, Humanities, Natural Science
Science	40 questions/ 35 minutes	No prior knowledge or reading list required
		NOT a science content test
Essay	40 minutes	Science reasoning questions test data interpretation, understanding of graphs and tables, and scientific method
		Optional essay (check with your schools to see if it's required)
		Evaluate and develop perspectives

Step 2: Understand how scoring works (and how to use it to your advantage)

- Composite Score: 1–36
 - Average of your English, Math, Reading, and Science scores (also from 1–36)
 - Because the scores are averaged together, you can play to your strengths. Work to bring everything up, but *really* bring up those areas where you're strongest. That can help balance out a weaker score elsewhere.
- Essay: 2–12
 - Does not affect the composite score in any way
- The average ACT score is around 20–21.
- Every question is worth 1 point, no matter if it's easy, medium, or hard. Don't rush through the easy questions, making careless mistakes, only to get to the hard questions where you're less likely to pick up points.
- There is no penalty for wrong answers, so don't leave anything blank. But you shouldn't necessarily try to answer all the questions, either...

Step 3: Create your own pacing strategy

- Remember that nice score distribution we looked at earlier? ACT does that by making the test very challenging to finish. The questions are usually fairly straightforward, but there's an impressive time crunch. You're used to finishing tests in school, so it feels like you should absolutely be trying to finish this test. However, racing to finish the ACT might actually cause you more harm than good.
- Let's compare two students and their methods for tackling the ACT Math test:
 - **Student 1:** Attempts all 60 questions. Makes careless mistakes on easy questions, gets bogged down on long word problems, runs into some stuff he doesn't know, and ends up running out of time. Gets **30 questions right** and ends up with a **score of 20**.
 - **Student 2:** Slows down and only attempts 40 of the 60 questions. Avoids careless mistakes, skips questions that are confusing or time-consuming, and doesn't run out of time. Gets **38 questions right**, but also fills in (B) for all of the 20 questions she skipped and picks up 4 more points. She ends up with a **score of 26**.

- So how many questions should you do? Depends on the score you're shooting for, so be sure to do your research!

School	Target ACT Score
Boston University	29–32
California State University—LA	15–20
New York University	29–33
San Diego State University	23–28
University of California—Davis	25–32
University of Michigan—Ann Arbor	30–33

- Slow down and work on the number of questions you need for your target score.
- Skipping a question? Don't leave it blank! Put something down—it can't hurt you, and it might even help.

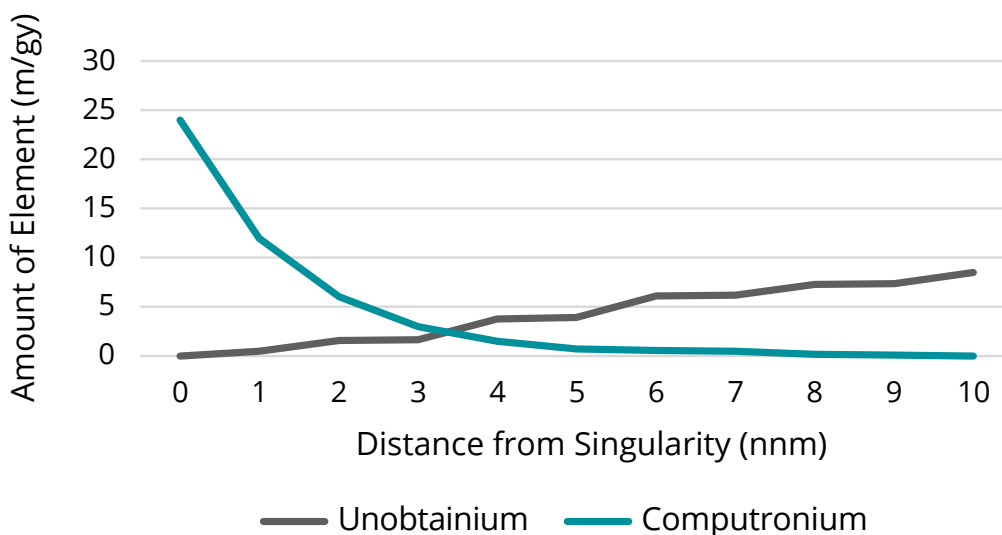
Step 4: Use the answers to help you

- Process of Elimination: this entire test is multiple-choice, which means the answers are already there! Use those answer choices to your advantage.
- English
 - Don't try to fix the problem first and then find an answer that matches your fix. That wastes time and could lead you to a wrong answer.
 - Eliminate answers that you know are incorrect.
 - Compare what's left and see what's changing. Use that to make your decision.
 - Make sure you brush up on punctuation rules: ACT LOVES COMMAS!
- Math
 - Eliminate answers that are clearly too big or too small.
 - If you read a question that feels like it wants you to write an equation but seems tricky, see if you can work backwards from the answer choices.
 - Use the diagrams! Unless a question asks you what "must be true" or "could be true," diagrams are drawn to scale. Use them to help eliminate choices or estimate answers!

- Reading
 - Eliminate anything that isn't supported by the text.
 - You know in English when you explain what you think "based on the test"? Forget all that for the ACT. There is no analysis or interpretation, so avoid overthinking answers.
 - Can't find support in the passage? Cross it off.
- Science
 - This is not a science content test. Do not try to read and understand all the science. Eliminate answers that aren't supported by the passage.

Quick question: You keep saying the Science test “is a science reasoning test, not a science content test.” What do you mean by that?

- Great question. When you’re preparing for ACT Science, it’s easy to start wondering if your Chemistry class prepared you, or if you should wait to take the ACT after you’ve taken Physics. This test isn’t testing whether or not you know Avogadro’s number or what terminal velocity is (that would be science content). This test is testing whether or not you can interpret data, read charts and graphs, and apply the scientific method.
- Take a look at the following figure:



- You might take a look at this thing and think, “I have no idea what this graph is even measuring. I’ve never even seen those units before.”

- So then the temptation is to go to the text and read up on singularities and unusual elements. Hang on, though. ACT isn't going to ask you what unobtainium is. A question might ask instead, "As the distance from the singularity increases, the amount of unobtainium _____." If your answer is "increases," you've got it! That question tested your reasoning skills, not your content knowledge.
- Don't spend time reading all the text of the Science passages. Go straight to the graphics and start with the questions that ask about the data points. If you do need to read, just read what you need.

Step 5: Practice!

- Do a full-length practice test on your own. Find free tests on [ACT's website](#) or get [The Official ACT Prep Guide](#).
- Take the test timed.
- Check your answers, but don't only focus on why the right answers are right. That matters, but you also need to focus on why you chose the wrong answer. Did you misread the question? Mess up on a negative? Need to review a comma rule? Make a list of all those problems and work on them. That will help you improve as you find places you need to work on.
- Repeat with another practice test.
- Need more help or having trouble staying motivated? Sign up for a class or find a tutor to provide some guidance.

GET MORE PRACTICE!

Marco Learning's YouTube Channel

- New videos every week about college admissions, the ACT®, and more
- Live review sessions with Tom Richey, John Moscatiello, and the rest of the Marco Learning Team

SAT® Summer Camp—Only \$99!

- Six 90-minute sessions with ACT® experts
- Review the content and strategies you need for all sections of the exam
- Create a personalized testing and study plan

