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How to Get Into Stanford (By an Accepted Student)

Posted by Dr. Fred Zhang | Mar 12, 2016 8:00:00 AM

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Many students want to get into Stanford, one of the most prestigious undergraduate institutions in the United States. While getting into Stanford is very tough, there are definite rules to Stanford admissions. Strategizing around these rules will greatly increase your chances of getting in.

Note: the following advice also works for admissions to UC Berkeley and Cornell. While Cornell University and the University of California at Berkeley are not the same as Stanford, they are both very highly ranked colleges with only a slight engineering tilt.

Stanford University is one of the most difficult colleges to get into, with a current acceptance rate of only 5.1%. It is consistently ranked in the US News' top five universities. **Stanford is the top choice of many students** whose focuses coincide with what Stanford offers (e.g. a West Coast life or a large research institution with a slight engineer tilt). Stanford is also, by far, the top US-News-ranked school west of the Mississippi (the second is Caltech, which attracts a completely different crowd).

However, Stanford does follow certain rules when it comes to admissions. And no, these rules are not as simple as "focus all your time on academics" or "be as well-rounded as possible." (In fact, those two phrases are the two biggest myths for admissions to Stanford!) Knowing the rules won't guarantee you admission, but you'll have a heck of a better chance than if you're applying in the dark.

I'll go over everything you need to know to get into Stanford, whether you're a humanities or STEM student, and I'll explain which admissions strategies are false and could seriously impact your chances of

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getting accepted if you follow them.

Why Listen to Me?

There are lots of writers out there giving admissions advice without any personal experience. Most journalists writing articles on Stanford admissions do a few hours of research on the school (or a few days at most) to meet their article quota. However, I have personally spent weeks, if not months, thinking about Stanford admissions. I must have spent **over 100 hours** explicitly on Stanford admissions, and I got in:

Your Acceptance Visit to Stanford!

Sasha Tue, Apr 12, 2005 at 4:57 PM
<sasha stanford.edu>
To @gmail.com

Dear Fred,

Congratulations once again on your acceptance! I'm looking forward to your upcoming visit to our campus! I hope that this visit will give you a picture of what Stanford life is like. Your host for the nights of the 17th and 18th will be Chris a freshman from Boulder, Colorado. Chris lives in Burbank, Room and his email address is @stanford.edu. You should receive an email or call from your host a few days before your visit.

A letter from my admissions officer to me after I was accepted to Stanford discussing the admitted-student weekend details. This letter has been modified to summarize meaning and protect privacy.

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More than just getting accepted, **I actually spent a substantial amount of time thinking about what Stanford was looking for** and crafting an application to Stanford. To me, Stanford was one of the top two schools I was interested in, so I took the application very seriously. I actually visited the campus twice before even applying, attended admissions sessions where I asked dozens of questions about what they were looking for, searched online and in bookstores, wrote an entirely separate essay, and had a separate admissions strategy for Stanford alone.

I'm not saying this to brag; I'm letting you know that I have some unique qualifications that allow me to help you the most. That I was accepted, and that I spent tremendous energy thinking about Stanford, means that my advice can hopefully help you substantially as you prep for the SAT / ACT and apply to Stanford.

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Note: if you've read our article on Harvard admissions, I will cover some similar material here. You may want to skim this section, but definitely pay attention to the differences between the application processes of Harvard and Stanford. Also, pay attention after this section because I will talk about Stanford-specific aspects then!

In this section, I'm going to tell you the **critical three truths and two myths you absolutely need to know to get into Stanford.** The first ones will be well-known, but the final ones will be uncommon knowledge and will help you get that extra boost!

First Truth and First Myth

The first truth is that Stanford is, first and foremost, an academic institution, so you need to have spectacular academics to get in. The 25th percentile score of admitted students is as high as a 1400 (SAT) or 31 (ACT). This means that the vast majority (75%) of Stanford students get above these scores, and those attending with scores lower than these are superstars who make up for it. **If your scores are below those numbers, the most effective thing you can do to raise your chances of admission is studying more for the SAT / ACT.** If your scores are below that bound, the primary reason Stanford will reject you is based on scores alone. The 75th percentile of Stanford scores is 1560 (SAT) or 34 (ACT), so if you are above this, you can presume your test scores are sufficient.

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This leads to the first myth of Stanford admissions. **The first and most naive myth is that Stanford only cares about grades.** Like most myths, this one results from taking the truth too far. Many people think that, since Stanford is an academic institution, shouldn't they just care about academics? After all, if you're trying out for the football team, they wouldn't measure your skills in baseball, right? The truth is that Stanford, of course, cares about academics as its core, but **it also cares about qualities beyond academics.** Stanford is not just taking the people with the highest GPA scores and the highest SAT scores.

Why isn't Stanford just looking for students with the highest scores? The first reason is simple numbers -- there are just too many students with stellar academics. The average ACT score for a Stanford student is 34 -- thus Stanford considers this score or higher stellar. Yet a 34 still puts about 1% of the high school population above you. With 3.3 million high school seniors a year, this is about 33,000 students, many times larger than the roughly 2,100 students Stanford accepts each year. Therefore, top colleges like Stanford need to look beyond academic scores to distinguish between these students.

The second reason starts with the understanding that many top colleges, like Stanford, are looking for students who can have a **significant and positive impact on the world.** Stanford believes that non-academic factors, in addition to top academics, help predict who will have a positive impact in the future. These non-academic factors (known under the umbrella term "extracurriculars") include participation in clubs or sports and dedication to helping others.

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Therefore, we can replace the first myth with our second truth: **Top colleges care about more than academics and want to see strengths in many areas,** from GPA and SAT / ACT scores to extracurriculars and community service.

While the most naive myth is that Stanford cares only about academics, in reality, the above truth of multi-area admissions is actually well-known to people who have done even a minimal amount of college admissions research. The myth of pure academics is more of a non-myth: it's a myth that lots of people love to bash, but not many people believe. In fact, over-bashing this first myth leads to the second myth, which is more insidious.

Second Truth and Second Myth

This second myth, **the biggest and most harmful myth, is that Stanford cares about students being well-rounded** in the sense that they should be equally excellent in all areas. This second myth is the most pernicious because so many people believe it, unlike the first myth.

From many personal surveys, I have found even well-researched students and parents fall prey to this myth. In fact, I myself, during my early years of high school, believed in this horrible myth, even though I had already done hundreds of hours of research at that point. **Because so many educated people believe it, and because it has the potential to steer you wrong, I personally think this myth is the most damaging.**

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The well-rounded myth goes like this: because Stanford wants you to be well-rounded, it's best to perform excellently in all areas. You should aim for a high seat in your school orchestra. You should be number one or two in your school debate team. Run for student council and become the treasurer. Get a score in the 95 percentile or higher on your SAT / ACT. Get an A- or higher in all your classes. The mythical implication is that the "Stanford Scorecard" grades you based on your weakest area, so you want to eliminate all weaknesses. Under this myth, you should focus all your time on your *weakest* area to eliminate it and become as well-rounded as possible. At the end of the day, you end up with a mythical optimal application, one where you're (nearly) equally great at everything. Unfortunately, college admissions is much like being in an unstable boat: **being too well-rounded will sink you.**

The truth is that Stanford sees being very well-rounded as too boring. Mathematically, it is a fact that all circles, besides scale, are identical. Similarly, everyone who is well-rounded looks the same: they're great (but not earth-shattering) in everything. There is nothing to set you apart. Also, dilly dallying in a large number of areas will make you look like a dilettante.

Third Truth

The third and final truth is that **Stanford would much rather see a candidate who is OK at most things, but really great in one specific area.** That specific area is called your spike, and it can be in almost anything: conducting microbiology research,

publishing short stories, starting a small business, etc. Your spike makes you a strong candidate because it's unlikely many other students will have the same spike as you, so it help sets you apart and makes you unique. Admitting lots of students with different spikes allows Stanford to create the diverse campus they desire.

Furthermore, Stanford is looking for students who will succeed in the future. In our modern world, specialization is the key to success. Think about it, if you break a bone, you want to see a doctor who's great at resetting bones, right? Not a doctor who's pretty good at setting bones and also pretty good at diagnosing the type of flu you have and pretty good at recommending a diet to keep you healthy.

It’s okay to be lopsided-- in fact, it’s even desirable! **You should aim to develop one area that you’re super strong in.** In your spike area, you should definitely aim to be nationally or state ranked, or accomplish a goal that’s rare for a high school student. Think top 100 football player in California or top 1000 math competition student in the USA. Think getting a pilot’s license at age 12. In all other areas it suffices to be 99th or even 90th percentile. A moderately good score in your English class will do. A few dozen hours of volunteering will do.

Recap

The most naive and prevalent myth is that admissions is all about academics. In reality, selecting only for academics leads to an uninteresting community. Stanford cares about extracurriculars too,

and doing well in just one area of school (or even all of school) isn't enough.

Unfortunately, an overly-reactionary response to the above generates the worst myth. **Myth #2 is that you should be well-rounded and great (but not necessarily excellent) in every field.** In reality, being too well-rounded makes you look exactly the same as others who are well-rounded, and it makes you look like someone without direction.

The truth is that you want to be OK in every field but especially stellar in one field in particular.

Hierarchy:

Truth #1: Have great Academics (Stellar SAT / ACT Scores)

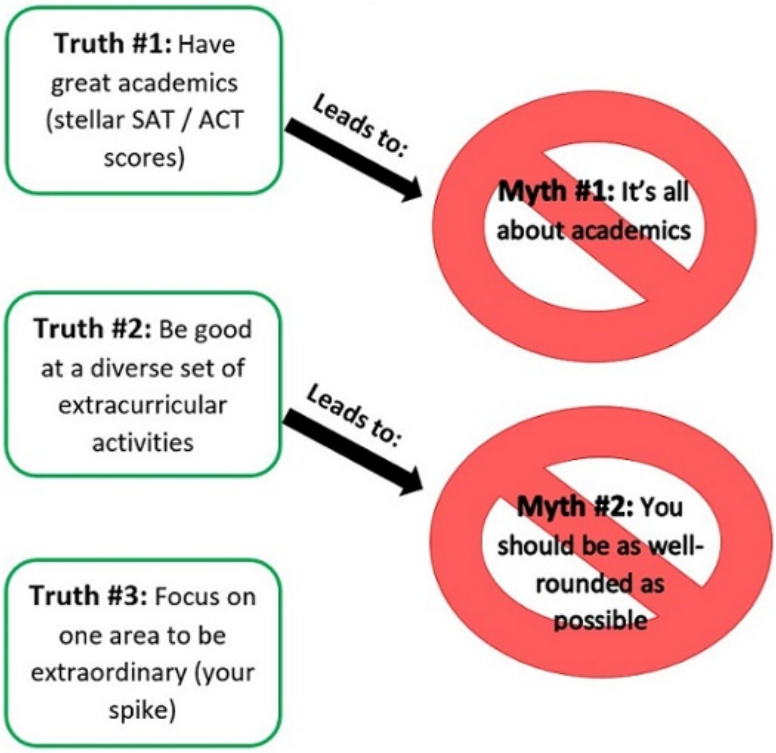
Myth #1: It's all about academics

Truth #2: Be good at a diverse set of extracurriculars

Myth #2: You should be as well-rounded as possible

Truth #3: Focus on one area to be extraordinary

Truths and Myths of Stanford Admissions



How to Apply This Information to You

Based on the above information, **your first goal is to ensure you are good at academics.** Get good grades in school, and make sure you're at least at the 25th percentile of the SAT / ACT cutoff for the school you are applying to. Even if you are above the 25th percentile, if you haven't prepped at least few dozen hours yet, you should aim for the 75th percentile to strengthen your application. SAT / ACT prep is always one of the most time efficient ways to raise your chances of admission.

After you're well above the 25th percentile cutoff, the next step is to overcome the first myth. Stanford cares about more than academics, and you'll want to get

good extracurriculars and volunteer experience.

Once you have a sufficient set of baseline activities, it's time to overcome the second myth. Stanford is not all about being diversified and well-rounded. **You want one area to stand out above and beyond others.**

Stanford's Tilt Towards STEM

One difference between Stanford (and Cornell and UC Berkeley) and some of the other top 10 colleges is that Stanford is not a pure liberal arts college. Instead, Stanford is a liberal arts college with a significant STEM (Science, Technology, Engineering, and Math) tilt. What does that mean? It means that, all else being equal, **if your interests are a bit more towards engineering, that will slightly help your admissions chances.** For your base diversity of extracurriculars, it helps to lean towards engineering/math. It also helps if your spike is in engineering/math. All else being equal, if you were a top 100 young writer or a top 100 math competitor, it's somewhat more helpful for admissions to be the latter.

Don't take my word for it. You can Google this yourself. Note how Stanford is in the US News' top-ranked engineering schools, whereas Harvard and Yale are nowhere near the top 10. Stanford's strength is not just in graduate engineering, but also undergraduate engineering, making it truly stand out. (Most other stellar graduate programs, like my own Harvard Statistics program, have questionable

undergrad programs). At Stanford, better professors mean more cutting-edge grad students and teaching assistants for your undergrad courses. Part of it is also a self-fulfilling prophecy: because good engineering-type undergrads come here, it becomes a good place for similarly interested students.

Note, however, that I said Stanford has a STEM tilt. **It is, by far, not a STEM-only school,** which places like MIT, Caltech, and Carnegie Mellon are a lot more like. This means that, unlike pure engineering schools, math and math extracurriculars are NOT the only things that matter.

These next two sections will give you advice based on which subjects you plan to study in college. If you're less into STEM, read the next section, but if you're already focusing on a STEM area and plan on continuing to do so, skip down two sections for guidelines for your situation.

Guide for Students Less Interested in STEM Areas

Do you plan on majoring in a humanities or similar subject? Then this section is for you!

Just because Stanford tilts toward engineering does not mean that the only way to get into Stanford is to be an engineer. You don't even need to be interested in engineering in general. Stanford is not MIT or Caltech. Stanford is incredibly strong in say, economics and literature, as well. Even if your interests are solely in those areas, Stanford will be a great fit for you as well.

Your application can be completely bereft of engineering aspirations, and you can still do well. In fact, I am quite sure that any humanities-heavy application that would have done well at Harvard, Yale or Princeton will do equally well, if not better, at Stanford.

However, you should not forget the fact that Stanford still likes baseline diversity. Your spike doesn't need to be related to STEM, **but you should still be strong in quantitative subjects.** Even if your subject of

interest is Prussian history, you should be cautious about getting a B in AP Calculus AB, taking the easiest math classes, or getting as “low” as a 650 on the Math SAT section.

Since Stanford has a very large number of applicants, they have enough humanities-spike applicants who can, at least, get the basic A or A- in the hardest math and science classes. You should take care to put enough effort into these subjects that you don’t drop into the middle of the pack. Stanford doesn’t take the excuse “I’m just not a math person” (and, in fact, they’re probably against the culture that makes such a phrase commonly acceptable in the first place).

What’s a good enough baseline in math? **I’d say something in the 720-800 range in the SAT Math section or 32-36 on ACT Math will do.** The SAT/ACT is not competitive math -- doing well on it doesn’t signal you’re nationally ranked in math. In fact, the SAT / ACT Math sections are only designed to test the most basic common denominator areas covered in high school math classes across the United States.

Thus, scoring substantially underneath a perfect score on the SAT / ACT does actually signal to Stanford a lack of understanding of some rather standard areas of math. Once you get below a 700 (SAT Math) or 30 (ACT Math), Stanford will realize that you don’t have a full command of standard concepts like factorizing variables or applying the Pythagorean theorem.

The good news is that you can actually improve quickly and consistently to the 700+ level on the SAT. **All it requires is mastering baseline content of math and understanding the highest-gain SAT math strategies** (like a slight amount of question

skipping and practice). You can study on your own by reviewing and mastering math content first while focusing lightly on math strategy. If you are studying with PrepScholar, we will automatically detect your situation and give you the right study material for this improvement.

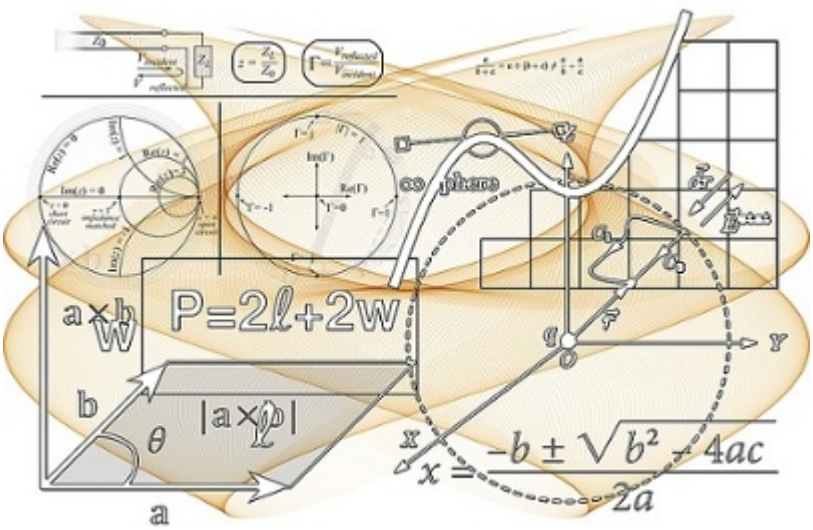
Students whose forte isn't engineering should realize that Stanford is very welcoming of interdisciplinary study. Stanford would love to see an applicant talk, not just about the humanities, but how your expertise in the humanities uses areas like computer science or math to help refine your analysis. **If you are truly interested, it will help your application if you mention an aspiration to use some amount of engineering in your future studies.** For example, if you are into religious studies, with a focus on the Old Testament, you might talk about how you're interested in using statistical analysis to refine the documentary hypothesis.

As for your spike, since your natural strength is outside of STEM, I would not go for a STEM-type spike. Usually, spikes are much easier if done in a field with natural talent, that you naturally enjoy. A STEM spike would make much less sense for you, not to mention it would be a lot less pleasant to accomplish. **You should consider competitions for speech, debate, writing, essays, and so forth.** For example, for enthusiasts in debate-type activities, there's Model UN, Junior State of America, governor's school, mock-trial, and nationwide debate.

Competitions provide a direct way for admissions officers to see how good you are, but you can also do other tasks that qualitatively seem similarly

accomplished. For example, if you start a theater club that has a huge number of audience members, or do journal-quality academic research into Victorian English literature, you will be well positioned for your spike. To find out more, you can see this article on spikes (search for "Step 1" to get directly to brainstorming!)

Guide for Students Strong in STEM



If your strong point is actually quantitative, then that's a great advantage. After all, Stanford is engineering tilted. Even more to your advantage, I personally got into Stanford using this path, so I will have much more refined strategies for you than usual, including naming specific programs to try.

Ensure Academic Excellence in STEM Fields

Since you consider yourself a strong STEM candidate, at your core, **it's important to be absolutely stellar in the STEM fields** -- that means all A/A+ on your courses, with only the very occasional A- sprinkled in. Make sure you are taking the most difficult STEM courses offered by your school. That means taking APs when they are available and, within APs, choosing the harder option (Calculus BC instead of AB). For the AP exams, make sure you get a 5 as much as possible in these fields.

If you're naturally talented at STEM and take the hardest courses, there's a high probability you'll get great grades. However, you want to turn that high probability into a certainty. **The biggest reason for naturally talented STEM students to do mediocre in STEM courses is lack of diligence.** Many students naturally talented at STEM want to focus on only what they're interested in at the moment. It's important to see the benefits to your STEM education that would be possible if you got into Stanford and convince yourself it is worthwhile to put in the grind that sometimes is necessary to get good grades in school.

To illustrate, let me tell you the real story of a high school classmate of mine. Let's call him Kevin. Kevin was intensely bright, would score at the top of intelligence tests, and was into battle bots. He would literally put all his time into building these robots, skipping English classes, Physics classes, and even sleep to spend time on his intense interest. In the end, he earned D's in English and C's in Physics (which he was otherwise great in). Sadly, when it came to admissions time, Kevin wasn't able to get into any

college ranked top 50. With his intelligence, he could have easily swept the US News top 50 if he had put even a modicum of diligence into schoolwork.

Okay, so now you've got your 5 in AP Calc BC and your A's in math, science, and technology classes. What's next?

Ensure a Good Academic Baseline Outside of STEM

The next step is to make sure that your academics outside of STEM meet at least some baseline of quality. This doesn't mean that you have to be great in the humanities, **but it does mean that you'll want to keep the B's in the humanities to a minimum.** You don't need to take any AP humanities classes (after all, I didn't), but taking them and getting a 4 or 5 on the AP tests and an A/A- in the class will benefit you.

Standardized tests like the ACT / SAT are a great way to show well-roundedness. They are difficult enough that getting a sufficiently high score signals you're in the 95% percentile or above in all the US -- certainly enough to qualify as well-rounded. However, the ACT / SAT isn't specialized enough to be your spike.

If you're a little weaker on the humanities side, again, shoring up your SAT / ACT score is the fastest, most effective way to improve. You'll want to target an SAT score of above 650 (higher is better) or an ACT score of 28 or above. I firmly believe that being great quantitatively correlates with being smart in general. **You can definitely get this score if you put your**

mind to it. (The only caveat is that you need to be reasonably fluent in English; if you are not a native speaker and aren't fluent, I suggest you make this a priority, probably through immersion in an English-speaking culture.)

Your test prep strategy will be centered around the fact that the SAT / ACT is an analytical test. The same skills you used to become good in quantitative subjects will be useful in mastering these tests. Since you're only targeting a 650 (or 28) or above on these sections, you don't need to stress as much about the last few problems and being careless. You do need to memorize all the most common grammar rules and learn how to identify and skip the most difficult problems. You can do this yourself, or you can use our program, PrepScholar Online Prep, to automatically identify these weaknesses and fix them.

Include Well-Rounded Extracurriculars

Round out your application with some lower-hanging fruit if possible. Get to a leadership position in some club that requires public speaking -- whether that be debate, Model UN, Junior Statesmen of America (JSA), or something else. Many areas of politics and law are surprisingly close to the logical systems that you're used to in STEM.

Consider joining a sport -- many JV teams are not incredibly competitive. Also, play to your strengths -- if you're more dexterous than strong, choose squash, for example. If you're fast and have good hand-eye coordination, consider baseball. Sports teams will take up a ton of time though, so make sure you're well

positioned and can handle the time commitment.

We have a guide that lists hundreds of extracurriculars, and you can use this list to brainstorm how you'll build a well-diversified base. **Remember, for your diverse activities, you don't need to be great at them.** Participation matters, getting small prizes like being treasurer or best debater matters.

Focus On Your Spike

Now that you've achieved good SAT / ACT scores and have a well-rounded base of activities, it's time to build up that final factor that will get you in -- your spike! This is where you really get to show off your STEM skills.

When it comes to spikes, **the name of the game is to be highly-ranked in recognized fields**. One of the most natural environments to be ranked in is a competition. Now, naturally, the more recognized the competition, the better. As you might imagine, the most well-known, difficult, and participant-heavy competitions are the most prestigious. It's better to rank in the top 1000 of one of the most prestigious competitions than it is to rank in the top 100 of a competition of middling prestige. **Therefore, you should aim for the highest prestige competition you can do well in.** You should consider competitions from highest prestige down in that order whenever possible. Here's how to start.

The Two Biggest STEM Spikes

When it comes to prestigious STEM competitions, two of them take the day: **the US Math Olympiad (I'll call it the USAMO series here), and the Intel Science and Engineering Fair (ISEF).** These are two competitions everyone should consider.

The USAMO Series

The USAMO series is much more centered around pure math and solving problems relatively quickly (think a few minutes to an hour in a timed environment). If you want to get a taste of what an easy problem looks like in the USAMO series, just look at the hardest problems in the SAT / ACT Math section, or the hardest problems on the SAT Math II Subject test. (The hardest problems are usually the last ones.) The ISEF is more about tinkering around, spending days and months doing research similar to university academics, and then presenting your results. ISEF is closer to working on a hobby or personal project for a long time.

Here's a sample AMC 12 Problem. If you can get this, you may be a good candidate for a math competition.

> **Three real numbers in the interval [0,1] are chosen independently and at random. What is the probability that the chosen numbers are the side lengths of a triangle with positive area?**
>
> A)⅙

B) ⅓

C) ½

D) ⅔

E) ⅚

To see the answer and a full explanation, go here.

If you consider yourself good at math, you should seriously consider the USAMO series (more unofficial info here)-- it can really be your spike. **The USAMO series is so prestigious that I have known Stanford students whose main spike was placing just within the top 1000 or 2000 in the USAMO series.** Why is the USAMO so prestigious? It's the oldest of the high school subject Olympiads, and it was the subject of Cold War tensions between the US and USSR in the old days. Most importantly, hundreds of thousands of the most mathematically strong students take it, making a top ranking really matter. The best way to sign up is to ask your high school math teacher, and if your high school doesn't do it, you should aggressively petition them to do it or search for a neighboring high school who will accept you as a guest.

A good rule of thumb for whether this spike is for you is if your **SAT Math score is 760 or above (or your ACT math score is 35 or above) and your SAT Math II Subject Score is 720 or above.** If you don't meet these thresholds, I would think very hard before

making the USAMO series your spike -- the USAMO series, after all, is just a much harder version of these tests, in nearly the exact same format. Further, a college applicant who has competitive USAMO series scores but questionable standardized test math scores sends very mixed signals that will diminish the USAMO series accomplishments.

Conversely, if you are above the SAT / ACT threshold, you definitely will benefit from taking the USAMO series, even if it isn't your spike. This is because, if you're above the stated SAT / ACT thresholds, your exam score is not showing your true skill. Your true skill is literally off the SAT / ACT charts; you need to upgrade to the USAMO series to show off all your math skills, even if you don't perform amazingly.

To recap, go into the USAMO series if you do well on math tests like the SAT Math. The USAMO series will be a definite spike for you if you make it into the top 1000-2000 rankings. The best resource to train for the USAMO series is The Art of Problem Solving. If you're good at tests and competitions, but not math, the rest of this section is for you.

Intel ISEF

There are also many students who are strong in STEM **but aren't at their best when solving timed problems.** Some students get anxious from the pressure while others just don't do well on tests, even if they're brilliant at STEM. These students might be found writing their own computer program for months at a time or working on a science experiment for weeks. If this sounds like you, the prestigious

competition you should consider is the Intel ISEF.

Like most science fairs, the ISEF requires you to do research and then present it in a competition. Unlike most science fairs though, **the ISEF is the premier science fair across the entire United States.** While winning your high school's local science fair is like winning a 100-meter dash in your town, winning the ISEF is like winning the 100-meter dash in the Olympics.

You can't apply directly to the ISEF. Instead, you have to start out first in a regional science fair, and, if you do well at that, you can advance into the next ISEF rounds. You can read about their judging criteria here and about a real winner's experiences here. Some of the key factors to winning include being innovative and original. You have to be rigorous, but not nearly to the degree of professional science research. Being interesting is the name of the ISEF game.

What does a winning ISEF project look like? Here's an excerpt from a press release on a recent winner:

> Raymond Wang, 17, of Canada, was awarded first place for engineering a new air inlet system for airplane cabins to improve air quality and curb disease transmission at this year's Intel International Science and Engineering Fair, a program of Society for Science & the Public.
>
> Wang's system improves the availability of fresh air in the cabin by more than 190 percent while reducing pathogen inhalation concentrations by

> up to 55 times compared to conventional designs, and can be easily and economically incorporated in existing airplanes. Wang received the Gordon E. Moore Award of US$75,000, named in honor of the Intel co-founder and fellow scientist.
>
> Watch the incredible video here!

To show originality for the ISEF, it matters that you tackle a problem that is interesting to the scientific community. Since few high school students have a good overview of the academic science literature, it is important for any student to have a professional academic scientist or engineer be their mentor. This will ensure that you work on a problem the field considers important. Also, good mentors with previous experience will know which problems can be done by students and which would be too complicated or time-consuming. **After you choose your field and mentor, having the tenacity and focus to put your creative thinking towards the problem is key.** Students who have historically had a lot of trouble staying focused or finishing projects should be wary. To get started, you can sign up for the ISEF here.

With the USAMO, doing well on SAT Math is a good predictor of performance; being fast and being good on tests is important. With the ISEF, tenacity and the ability to stick with a project for hundreds or even thousands of hours from start to finish is important. **Ranking in the top hundred for ISEF qualifies that as a spike for you.**

Other Options for Spikes

Beyond the top two STEM competitions above, the number of competitions begins to increase dramatically. **In the sciences, you have the Physics, Chemistry, Biology, and Informatics (Computer Science) Olympiads.** These competitions require you to work with logic very intelligently, and all require memorizing and being familiar with some facts. I'll eventually have another article on these series (I personally participated in each one while in high school), but for now here's quick overview.

Math Olympiad is special because it's the most competitive, with the highest number of people taking the first round. Because so many people prep for the Math Olympiad, the field has changed so that a good part of doing well on it is having tons of practice, so you know immediately which equations you need to pull out when you see a particular mathematical expression. Biology requires the most memorization. In fact, most of the beginning rounds are all about recalling the text of Campbell Biology in a timed fashion. Chemistry is a happy mixture of using logic to solve problems and memorizing a moderate list of information to help solve those problems. The hands-on portion of Chemistry and Biology require you to be good at following memorized procedures. On the other hand, Physics and Informatics have a lot of hands-on sections that really require resourcefulness and novel problem solving. In these other competitions, I would say **qualifying for the top 20-40 makes the competition a spike for you in the eyes of Stanford.**

Further, not all spikes need to be in explicitly ranked fields. You could discover a new protein with significance to medical research. There wouldn't necessarily be a competition for the discovery, but if the discovery is qualitatively stunning enough, it can count. For Stanford's spike, you can brainstorm an amazing discovery: perhaps a biological process, an electrical engineering discovery, or something else. You can also build something new: whether it's an awesome computer program, a cool robot, or a fun electronics project. **You should make sure that the project is impressive though.** For example, make sure that qualitatively, the project would feel "as good or better" as ranking 1000 or better on the Math Olympiad. Stanford is all about engineering, and they would love to see you build something of your own.

There are many other competitions and ways to show off your special skill within the STEM fields. Generally, beyond the top few listed above, you can also brainstorm your own fields. Once you have a competition or field in mind, it's useful to evaluate how prestigious it is. **Remember, the less prestigious a field, the higher you have to rank to be afforded the same credit.** To estimate prestige, first look at how many people participate -- the more people who participate, the more prestigious. Second, look at the skills of the average participant: the more skilled people coming in, the more prestigious it is. Using this method, you can find spikes outside of the set ones above.

Conclusion

Stanford is one of the most difficult universities to get into, as are UC Berkeley and Cornell. However, all of them follow the same pattern of being a highly-ranked school with a slight engineering tilt, and all have a common admissions pattern.

Because these schools are highly-ranked, **it's critical to keep in mind the three truths:** 1) you need high baseline academics, SATs above 600 and ideally 750 in each section; 2) you need to have a diverse set of extracurriculars that you're decent at; and 3) you need to have one "spike" area where you're ranked top 100-1000. **Dispel these two myths:** 1) Stanford admissions is all about academics; and 2) Stanford wants you to be as evenly well-rounded as possible.

Keep in mind that **Stanford has a STEM (engineering) tilt.** This means that, if your focus is outside STEM, you should be the best you can be in that area and, if appropriate, tie your work into potential interdisciplinary work with STEM. If you are in STEM, you'll want to strongly consider pursuing success in a competition to show off the degree of your skill.

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Dr. Fred Zhang

About the Author

Fred is co-founder of PrepScholar. He scored a perfect score on the SAT and is passionate about sharing information with aspiring students. Fred graduated from Harvard University with a Bachelor's in Mathematics and a PhD in Economics.

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Ask a Question Below

Have any questions about this article or other topics? Ask below and we'll reply!

Nana Ansuah Peterson 3/12/2016, 10:17:52 AM

I am a student from Ghana. 2210 SAT. I have good grades, in Ghana, you don't get to do advanced

courses all the courses are at the same level but my teachers said they would mention that if there were advanced courses I would excel in them. I have 6 or 7 extracurricular activities and I have leadership positions in almost all. I am actually really committed to each one. I have no spike. The competitions you mentioned are not done in my country and my school is not a participant in the National Math and Science quiz. I am in a class of 220 students and I don't think my essays were anything special. Do you think I can get accepted into Yale, Stanford or Cornell? I was rejected by YaleNUS, I didn't receive an interview invitation. Thanks

Reply to *Nana Ansuah Peterson*

Dora Seigel 3/15/2016, 1:22:03 PM

Hi Nana,

I'd highly recommend taking the new SAT or ACT to improve your score. Based on the old SAT score you provided 2210, I'm guessing your CR+M score is about 1470. For Stanford and the other schools, you want it to be at or above 1560 to give yourself the best chance of being accepted.

If you want to calculate your chance of being accepted to each of these schools, do a Google Search for "[College Name] SAT Prepscholar" to find our admissions page for that school with an admissions calculator (at the bottom of the page).

I would recommend that you try to create a spike. I'm not sure what you're interests are, but you don't need to do what is specifically mentioned in this article. If science is your interest, you can

conduct a science experiment on your own and try to submit it for publication online or start a mentoring program for younger kids to help them with science. Think about what your passion is and try to do more extracurriculars related to that passion to create a spike.

Hope this helps!
Dora

Reply to *Dora Seigel*

Oseyi 3/12/2016, 10:22:56 AM

How can I develop a chemistry spike? I can't participate in any olympiads because if the short time I have spent in Canada

Reply to *Oseyi*

Dora Seigel 3/15/2016, 1:24:45 PM

Hi Oseyi!

You don't need to do what is specifically mentioned in this article to create a chemistry spike. If chemistry is your interest, I'd recommend competing in science fair (if that's an option in canada?). If not, you can conduct a science experiment on your own and try to submit it for publication online or try to volunteer or get an internship at a lab near you. You could also do chemistry related volunteer work such as start a mentoring program for younger kids to help them learn chemistry.

Hope this helps!
Dora

Reply to *Dora Seigel*

Pooja 3/12/2016, 11:16:52 AM

Hey!
Thanks for publishing this really helpful and insightful article!
I'm actually a student from India, and am very keen on pursuing a Computer Science-related course at Stanford for undergrad. I was reading through your article and the part about the spike got me a bit worried. I really love coding and the like, but I'm not sure how I can showcase my talent when there aren't any competitions that mimic the ISEF or the Olympiads where I live. Do you have any ideas on how I can bring my 'spike' into the limelight? Aside from programming, I'm also really into creative writing, if that's of any use.

Reply to *Pooja*

Dora Seigel 3/15/2016, 1:37:37 PM

Hi Pooja!

You don't need to do what is specifically mentioned in this article to create a spike. I'd focus on making CS your spike if you'd like to go to college for CS. I'm not sure what sort of code you write, but you could showcase your CS talent by doing CS projects on your own (building websites or analyzing data). You could intern for a local CS company or create a program where you

teach younger kids to code. You could attend a CS summer program. These are just some suggestions but anything related to CS will help build your CS spike!

Hope this helps!
Dora

Reply to *Dora Seigel*

James Smith 3/12/2016, 3:24:14 PM

What if someone participates in a lesser known olympiad but does well in it? Like the USAAAO (astronomy olympiad), where a national qualifier can go on to become an international qualifier at the IOAA.

Reply to *James Smith*

Dora Seigel 3/15/2016, 1:47:16 PM

Hi James!

That's great! You don't need to specifically do what is outlined in this article. The article is simply providing examples. I would recommend that you try to emphasize that astronomy or science spike by supplementing it with other astronomy or science related extracurriculars (volunteering in a science lab or competing in science fair, etc.).

Hope this helps!
Dora

Reply to *Dora Seigel*

Isabella 3/13/2016, 4:39:44 AM

Would participation on a FIRST robotics team (and holding a leadership role) count as an engineering "spike?" I was also recently nominated as a Dean's List Finalist, so I'm wondering if these are good enough accomplishments to get into UC Berkeley (dream school!) for Computer Science.

Thanks so much!

Reply to *Isabella*

Dora Seigel 3/15/2016, 1:54:45 PM

Hi Isabella!

That's all good. I would try to emphasize your engineering/science spike more. Consider competing in science fair, getting an internship at an engineering firm, or job shadowing an engineer.

Hope this helps!
Dora

Reply to *Dora Seigel*

Isabella Lau 3/15/2016, 7:01:17 PM

Do you have any suggestions for applying for an internship or job shadow? I'm a little stuck in thought in regards to the actual process of application.

Reply to *Isabella Lau*

Christine Sarikas 3/15/2016, 7:19:44 PM

Hi Isabella,

We actually have guides for both those topics; check them out here:

http://blog.prepscholar.com/internships-for-high-school-students

http://blog.prepscholar.com /job-shadowing-for-high-school-students

Hope this helps!

Christine

Janmay 3/15/2016, 9:08:07 AM

Hi!
Thanks for the great post.

I was wondering whether I stand a chance for Ivy League

I have 9.4+ GPA on a scale of 10. (Indian System) I am in 10th grade.

An ACT score of 34.

Coming to the extracurriculars, this is the part that worries me. I havent taken many activities as both my parents are working and I have to help my younger sister with her studies as well as take care of her. And

my school does not participate in olympiads. The teaching quality is a bit mediocre, it is more study focused rather than studies with activities.Although whenever the school hosted a play, I was the leader of the group. Also I was elected leader of all but one group projects assigned to the class. I have also been leader of another group in my community where we did 2 plays. I did most of the prep for those plays. I have some good experience in working with all sorts of people from our class and community.

The big question is that do all these count as extracurriculars that ARE competitive for Ivies?

Also I have been guiding students younger than me in my community about their studies. I also help my neighbours in sorting out problems with anything related to tech that they have (like phones, Tvs) etc.

Please get back to me.
I need to know whether I stand a chance

I am from India.

Reply to *Janmay*

Dora Seigel 3/15/2016, 2:00:42 PM

Hi Janmay!

That's a great ACT score. I would explain your family situation in your personal essay, and definitely list and explain those extracurricular activities. Your ACT score will definitely give you a chance at Ivies. Read more about the college application process and personal essay here:

http://blog.prepscholar.com/what-is-a-personal-statement-everything-you-need-to-know-about-the-college-essay

Hope this helps!
Dora

Reply to *Dora Seigel*

Dylan Wong 4/7/2016, 8:17:05 PM

Hi,
Do you have any advice for someone's who's interested in transferring to Stanford ? I have a 2260 sat score and I'm an international public speaker (top six in the world). I'm going to enroll in Berkeley soon. I know that my chances for a successful transfer is low but I would still love to try

Reply to *Dylan Wong*

Dora Seigel 4/11/2016, 1:16:06 PM

Hi Dylan!

I'd recommend you check out our complete transfer guide: http://blog.prepscholar.com/how-to-transfer-colleges-successfully

Also, I'd recommend you try to keep your grades up while at Berkeley (that'll look good to Stanford).

Hope this helps!
Dora

Reply to *Dora Seigel*

Mike 4/14/2016, 3:27:58 PM

Hello, I am Zimbabwean and I have a good accademic transcript,mostly Az and a few Bz, but in my Advanced Level studies final exams i obtained an A in Mathematics, B in Physics and C in Chemistry, top 150 out of the 10 000 participants in the 2015 National Mathematics Olympiad, and a 1550 SAT score. 6 extra curricular activities with positions of leadership and cofounded two of the clubs i was involved with.
I have always wanted to enroll with stanford for aerospace engineering, what are my chances of being admitted?

Reply to *Mike*

Francesca Fulciniti 4/17/2016, 3:04:03 PM

Hi Mike - I can't speak to your exact chances of admission, but our admissions info pages can estimate your chances based on some of your academic information. Just google "Stanford Prepscholar admissions" - the first link to come up should be the one you want. Enter in your pertinent info, and the page will produce the admissions estimate you're looking for!

Reply to *Francesca Fulciniti*

Lydia Neu 5/27/2016, 10:56:32 AM

Hi!
I am a high school student from Austria and I have only one year left until I apply to universities. I never thought about going to university in the US until recently and I have not achieved anything significant in my life, since I grew up in a very laid-back and uncompetitive environment. Do you have any ideas what I could do to prove that I have willpower and that I am a high achiever? What can I accomplish within a year? My strengths are drawing and languages, but I am interested in pretty much everything. I know I don't have a lot of time and I'm being a bit unrealistic with my goals, but I couldn't forgive myself if I didn't try.
Thank you! :)

Reply to *Lydia Neu*

Dora Seigel 6/18/2016, 4:18:22 PM

Hi Lydia,

If you like drawing and languages, maybe

consider entering some of your drawings into art contests? Volunteer to help teach younger kids how to draw? Or tutor younger kids in other languages? The possibilities are endless; these are just some suggestions.

Hope this helps!
Dora

Reply to *Dora Seigel*

Joeseph Kalib 6/18/2016, 7:26:31 PM

Hello Dora!

I am wondering how I can strengthen more aspects of my application. I got a 1510 on the sat (770m 740r/w) and have done well in all AP math/science classes (97+). I also placed in the top 3 for cycling at the state level (in a large state) however I don't know if this is the type of "spike" Stanford is looking for (as I desire to major in something stem related). Should I try and develop another spike more relevant to stem (such as USAMO) or is performing at a very high level in a sport still something which would suffice as a strong spike? Thank You.

Reply to *Joeseph Kalib*

Dora Seigel 6/21/2016, 2:57:36 PM

Hi Joeseph!

I would definitely say that's a spike. Stanford isn't necessarily looking for your spike to fit your desired major. For example, my friend who went

to Stanford majored in business but his high school spike was that he was a top jazz musician.

I would just try to emphasize your cycling spike as much as possible (compete in more events, teach kids how to ride bikes, raise money to buy kids bikes, etc.)

Hope this helps!
Dora

Reply to *Dora Seigel*

Sarah 12/17/2016, 5:15:59 PM

Hi I am wondering if this would count as a spike: I placed in the top 60 for cross country in my region(northwest, which includes Oregon, Washington, Idaho, Montana, Alaska, and Hawaii at the nxr event). I am good at cross country and track but likely will never be good enough to be recruited to the highly competitive Stanford team. Because I spend so much time on cross country it is difficult to fit in other activities aside from some coding I do for fun on the side. I am not willing to give up running as it is a huge part of my life. I am taking the most challenging coursework available at my school and doing well in all my classes. I am a sophomore so I haven't taken the real SAT yet but i scored a 1450 at the end of my freshman year on a practice test without really studying(730 math, 720 writing and language). I have since started a prep regimen. I am trying to get a STEM related internship or research position for this summer. I am also trying to figure out

if I should take less challenging classes in the humanities next year so I can participate in more STEM activities during the year outside of school. I think that I will end up in a STEM related field because that is my strength but I still really enjoy my advanced classes in the humanities and am reluctant to give them up. Also, given that I have taken advanced classes in the humanities my first two years of high school would it look bad to give them up now? Thanks

Reply to *Sarah*

Ellen McCammon 12/18/2016, 2:00:46 AM

Hi Sarah,

If you enjoy your advanced coursework, I advise you to stay in them, even if you have less time. Your SAT scores and your transcripts are both hugely important for college admissions, and showing that you took the most difficult classes available is very important.

Since you are so invested in cross-country, you can definitely focus on doing more STEM activities (like your coding) in the summer. If you can get a STEM internship or research position, that would definitely stand out to universities.

Good luck!

Reply to *Ellen McCammon*

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