

Interview questions: CFM - please type in your responses for each below!

Chao:

1. What is COMON?
COMON stands for the College and Olympiad Math Online Network. It is a community of mathematicians of all ages to gather, communicate, and learn. We create handouts, have problem collections, and host an annual sponsored math competition.
2. What inspired the founding of COMON?
As a high school mathematician, I've joined various online math communities. However, I realized they all had a common problem: everything they offered was on a schedule. Be it competitions, lectures, or mini-tournaments, there was a specific time for all the content. However, I live in Shanghai, so for me, a lot of these times were inconvenient. I decided then to create a math community that was self-paced rather than time-based, so that people could enjoy our material at their own leisure. So, instead of lectures, we produce handouts that people can read on their own.
3. How did you (Chao) find this passion?
After a gradual journey of building up confidence over high school, I realized that my voice (metaphorically) is something to be proud of. I then started to use my voice more. The ability to lead people, to drive people to reach their potential, to create something huge and global was always a dream of mine. Combining this with my interest in mathematics, and the problem with current math organizations previously mentioned, I created COMON.
4. Have you ever faced challenges in managing a community of highly talented mathematicians?
Of course I have. The main problem that comes with managing a society is how fragile the momentum in growth is. If I dedicate myself wholly to COMON, it grows without a problem. However, if I take a week or a month off to focus on school or other things, growth becomes stagnant. It's like a plant. Without watering it, it may start to wither. However, growing COMON is a lot more complex than spraying a plant with water, so unfortunately growth becomes stagnant more often than I'd like it to be.
5. What are some of COMON's achievements for society?
We've reached over a thousand people and deepened their appreciation for mathematics. We've connected them and allowed them to learn together, to sharpen each other in their mathematical capabilities. We've created a way for people to learn math together, in a fun, unpressured way, as a nice alternative to the cold educational system.
6. What is the process behind this organization? Can you elaborate?
The community is completely volunteer driven. In the past year, which is our initial year, we've tried a lot of different things, and we've realized that the most efficient way is to ask community members to write handouts, and some especially motivated and consistent handout writers become staff. Other than handouts, the other big COMON feature is the annual event MathMania. For this, I asked my friends to help me write the problems. As you can tell, the whole

organization is completely based off of volunteers, and without my amazing friends and the amazing contributors of COMON, the organization would have fallen to the ground ages ago.

7. Do people open chapters in their community, and is the organization global or limited to America? Or is it completely online?

The organization is completely online, because for a leader, this is convenient and easy to manage. It also allows COMON members to meet people from any country rather than limiting them to meeting people in their areas. Local math organizations sometimes don't offer much opportunity to socialize, especially in the Bay Area or New Jersey, where the math community is already tight-knit. This isn't to say that online communities are better, but for my own standards and requirements, I prefer online communities.

8. What do you hope to see in the future of COMON?

Once I graduate, I'm handing off the management of COMON to a friend from a lower grade, who is honestly a much greater mathematician than I am. I'm fully capable in his ability to grow COMON, and in the future, I hope to see COMON have more momentum than it does now, to inspire more people and fulfill our mission statement of inciting passion for mathematics.

9. How can people join in COMON's efforts?

You can email us from our official website, <https://comonedu.org/>, or you can join our Discord server and message a staff member that you want to help. We also occasionally send out notifications to call for help, so look out for those if you're interested. Especially the current staff graduates, there will be plenty of opportunities for you to join COMON. You can help by writing handouts, by writing test problems when our annual competition comes, by helping us with growth and outreach, website design, graphic design, or anything really. If you feel like you can help, don't be afraid to ask.

10. Does COMON have advisors that help with this advanced study?

Depends on what you mean by advanced; if you mean introductory college level math courses, then there are COMON staff that can help you out. But I think the best way to study material outside of COMON's handout syllabus is to connect with other people from COMON through our Discord server. Our server has students from all ages, from middle school to graduate students.

11. How does COMON hope to impact the community through its many opportunities for high school students?

The great thing about COMON is its low barrier to entry for writing handouts. Many high school organizations limit who can or can't write material for them for the sake of quality, but COMON produces high quality material despite letting anyone contribute. If a handout is deemed to be subpar, we will simply make some suggestions until it is good enough to publish. This way, students who are less experienced in creating mathematical materials and are ineligible to produce content in other organizations may gain this experience from our organization. And, of course, others can benefit off of the material they produce, creating a benefit for everybody involved.

Alicia:

1. Can you briefly introduce yourself and share with us your role at COMON?

My name is Alicia Zheng and I am from Shanghai High School International Division. I take position in COMON as the head of design. My intended major and interest are media studies and art history.

2. Could you highlight some of the key design contributions you've made to COMON?

I had the privilege of designing the COMON logo, a creation which I'm particularly proud of, also aided in the official website design, organizing the layout of the web page and coordinating the color scheme. In addition, my contributions extended to a range of visual assets, notably the public handouts we've shared publicly.

3. Why did you choose to become a part of COMON?

I decided to join COMON after a conversation with our founder, Chao. When he shared his vision of establishing an online math community, especially amid the challenges that the pandemic brought, I was immediately caught with it. The concept was not only rather innovative but also timely and practical, Chao's wish to offer mentorship opportunities and creating a platform where members could genuinely benefit made me want to take a part of this. On a personal level, I've always had a passion for website development, visual art design and branding. Being given with tasks like logo creation and assisting with advertising campaigns was precisely the kind of involvement I was looking for. So this is a perfect blend of my interests and the community's mission.

4. What inspired the design of the COMON logo? Could you walk us through your thought process?

Designing the COMON logo was an intriguing challenge. Given that COMON is a math community, it was important to ensure the logo reflects this element. I wanted the design to emphasize the name "COMON," and make it clear and easily spotted. Keeping in mind the logo's smaller dimensions, it was essential to keep the design clean, concise, and instantly recognizable. The choice of a dark purple background serves to contrast and highlight the light blue color name. To infuse some mathematical spirit into the logo, I integrated hand-drawn mathematical elements - a few contrastive color numbers on the background and recognizable formulas like the area of a triangle and certain trigonometric formulas. The hand-drawn approach was intentional, as I did not want the logo of COMON to be like many of the stiff digital design. It kind of adds warmth, and emphasized that COMON is a vibrant community, which also sets us apart from any impersonal entity.

Maxwell:

1. Please give a brief introduction of yourself as a high school student.

I'm Maxwell He, currently a senior student at Shanghai High School International Division. My intended major in college is computer science. In high school, I've participated in multiple math and CS competitions and achieved good results in some of them like the Canadian COMC and USACO.

2. How were you introduced to the CS subject?

I was first introduced to CS in ninth grade when I took C++ classes. After that, I started doing competitive programming and learned a lot of algorithms and data structures. I found CP very similar to and different from math competitions at the same time, which fascinated me. Till now, I still participate in small contests on Codeforces and Atcoder and larger competitions like USACO.

3. When and why did you join COMON?

I joined COMON in April 2022 and was among the first members to join. Chao has been a great friend of mine and we had been preparing for math competitions together for long. I trust his leadership and the community he'd be able to build with his passion for math. I was sure that I could meet more math people, or STEM people in general, from different places around the world.

4. Please describe your experience in COMON.

COMON is definitely one of the most helpful, encouraging STEM communities. The handouts are super neat and useful, and it has a great environment for discussions. At the same time, Chao as the founder is always looking for opportunities that could benefit community members. I was invited by Chao to author problems in Winter Mathmania. I could tell that all participants enjoyed this high-quality competition and definitely learned a lot from it.

5. What do you think will be the role of CS in COMON in the future?

I think COMON is on its way to becoming a community that's beyond math, and at the same time, many problems from math competitions are gradually starting to incorporate algorithmic topics like graph theory. You can tell from problems on platforms like Codeforces that math is almost the core of CP. Thus, I think in the future, COMON will definitely be home to both math and CS lovers, and discussions on these two subjects combined will definitely be very fun and fruitful.