

# NICHOLAS HAGEDORN

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Prospective major in **Pure Mathematics**. Proven leadership qualities and expertise in STEM through self-made initiatives, scientific research, and numerous awards.

## Education

### Princeton High School • 11<sup>th</sup> Grade Fall 2022

4.0 Unweighted GPA; 4.38 Weighted GPA. 9 AP classes with 5's on each AP test taken.

### Ross Mathematics Program • Summer 2021 & 2022

Self-explored number theory, Ergodic Ramsey theory, & set theory. Program ranked top 3 in the nation. Attended in 2021 and as a junior counselor in 2022. Only 5/100 accepted back as a junior counselor. Graded participant sets, lead problem review sessions, & lectured to 30+ students.

### New Jersey Governor's STEM Scholars Program • Fall 2022

Selected as one of the top 100 STEM students in NJ. Currently completing a year-long research projection.

## Activities

### Knot Theory Research • 2021 – Present

Found and proved the 5<sup>th</sup> of the five known strict inequality between knot n-crossing numbers. Research advised by Colin Adams of Williams College.

### Absolute Value • 2021 – Present

Vice President of Absolute Value, an international 501(c)(3) non-profit dedicated to engaging middle schoolers in math.

- Located in 3 continents, 5 countries, and 12 US states for over 25 total chapters.

### Speech & Debate • 2020 – Present

Officer. Competed on the national circuit on Princeton High School's Varsity Public Forum debate team.

- 1<sup>st</sup> place at the 9<sup>th</sup> annual Pennsbury Falcon Invitational national tournament.
- 3<sup>rd</sup> place at New Jersey's 2022 State Championships.

### Programming • 2020 – Present

Co-founder of PHS Competitive Programming Team. Three years' experience creating Python projects.

- 1<sup>st</sup> place at Princeton High School's hackPHS hackathon with 300+ competitors.
- 2<sup>nd</sup> place at Lockheed Martin's New Jersey & New York "Code Quest" with 200+ competitors.

### $\pi$ & AI • 2021 – Present

Co-founder of organization. Run math and programming circles at local middle school and library.

- Earned \$600 funding from America's Promise Alliance.

### Ideas Center • 2021 – Present

Leader on the Board (oversees all other PHS community service programs) and volunteer tutor at Princeton High School tutoring center; March 2022 "Tutor of the Month."