

Carl Joshua Quines

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Education Valenzuela City School of Mathematics and Science
2011–2018 *Rank 1 of 120, with High Honors*

Experience **Art of Problem Solving · Grader**
2017–now *AoPS weekly grader for Intermediate Algebra, Precalculus, Calculus, and WOOT (Olympiad-level course)*

Program for Inducing Mathematical Excellence · Director
2016–2018 *Philippine Mathematical Olympiad trainer
Produced two top 5% regional qualifiers, one top 20 national finalist
Founded program, designed handouts, delivered workshops* cjquines.com/prime

Competition mathematics tutoring
2015–now *Tutored for various national and international competitions
Produced British Junior Maths Olympiad qualifier (top 0.5% of 300 000)*

Research MIT PRIMES 2018 · Distance mentoring math research program

Throttling numbers for the cop and gambler game on graphs
with E. Slettnes and J. Lin. Manuscript in preparation. tinyurl.com/ydfn3jdd
Extended cop-throttling to gambler-throttling, established upper and lower bounds

AoPS CROWDMATH 2017 · Worldwide collaborative research project
Tied for top contributor in Graph Algorithms and Applications

Extremal constructions for compact and rectangle k -visibility graphs
with E. Slettnes. Manuscript in preparation.
Provided tight constructions for maximizing number of edges in visibility graphs

Variations on the cop and robber game on graphs
with E. Slettnes, S. Tsai, and J. Geneson. arxiv.org/abs/1710.11352

Intel ISEF 2017 · International science fair for secondary students
Second prize in mathematics category

Bounds on metric dimension for families of planar graphs
with M. Sun. arxiv.org/abs/1704.04066

Skills C++, Python, JavaScript, HTML, CSS, Visual Basic .NET, LaTeX, SageMath
Miscellaneous applications and programs github.com/cjquines

Awards National Olympiad in Informatics 2018 Rank 2 2017 Rank 7
Asian–Pacific Mathematical Olympiad 2017–18 Bronze
Philippine Mathematical Olympiad 2016–18 Finalist (top 0.5% nationwide)