

# Contest Math Resource Guide (05/16/2025 version)

Information Slides here. Send feedback to the author, Farrell Wu, at this form.

## 1 Reference Recommendations

Subjects are (**A**: Algebra, **C**: Combinatorics, **G**: Geometry, **N**: Number Theory).

### 1.1 Textbooks

Title	Author	A	C	G	N	CL	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
AoPS: Prealgebra	Rusczyk et. al	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–
Compet. Math for Middle School	Batterson	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–
Discovering Geometry	Sierra	–	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–
Chiuchang Self-Study Book	Various	✓	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–
AGMath (Alg, Geom, Mathcounts)	Batterson	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–
Schaum's Outlines (Interm. Algebra, Geometry, Trig., Precalc)	Various	✓	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–
Precalculus (UWash Math 120)	Collingwood et. al	✓	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–
Problem Solving, Exploring Paths	Grassl, Mingus	✓	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–
AoPS: Introduction to Geometry	Rusczyk	–	–	✓	–	✓	✓	✓	–	–	–	–	–	–	–	–
AoPS: Introduction to Algebra	Rusczyk	✓	–	–	–	✓	✓	✓	–	–	–	–	–	–	–	–
AoPS: Intro. to Number Theory	Crawford	–	–	–	✓	✓	✓	✓	–	–	–	–	–	–	–	–
First Steps for Math Olympians	Faires	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Gelfand Correspondence (6 books)	Gelfand et. al	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
How to Solve It	Polya	✓	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–
Prob Solving Through Recrt. Math	Averbach, Chein	✓	✓	–	✓	✓	✓	✓	✓	–	–	–	–	–	–	–
AoPS Volume 1: The Basics	Lehoczky, Rusczyk	✓	✓	✓	✓	–	✓	✓	✓	–	–	–	–	–	–	–
AoPS: Intro to Counting and Prob.	Patrick	–	✓	–	–	–	✓	✓	✓	–	–	–	–	–	–	–
Challenging Problems in Algebra	Posamentier et. al	✓	–	–	–	–	✓	✓	✓	–	–	–	–	–	–	–
Math Analysis & Approaches (IB)	Oxford Press	✓	✓	✓	✓	–	✓	✓	✓	✓	–	–	–	–	–	–
Lecture Notes on Math. Olympiad Courses, Junior (vols. 1 & 2)	Xu (Jiagu)	✓	✓	✓	✓	–	–	✓	✓	✓	–	–	–	–	–	–
Challenging Problems in Geometry	Posamentier et. al	–	–	✓	–	–	–	✓	✓	✓	–	–	–	–	–	–
Wiley Probs in Math for JEE Vol 1	Various Staff	✓	✓	✓	–	–	–	✓	✓	✓	–	–	–	–	–	–
Intermediate Number Theory	Stevens	–	–	–	✓	–	–	✓	✓	✓	–	–	–	–	–	–
A Mathematical Mosaic	Vakil	✓	✓	✓	✓	–	–	✓	✓	✓	–	–	–	–	–	–
A Gentle Introduction to the AIME	Annin	✓	✓	✓	✓	–	–	✓	✓	✓	✓	–	–	–	–	–
Math Circles (Russian Experience)	Fomin et. al	✓	✓	✓	✓	–	–	✓	✓	✓	✓	–	–	–	–	–
Solving Problems in Geometry	Hang, Wang	–	–	✓	–	–	–	✓	✓	✓	✓	–	–	–	–	–
Mathematical Puzzles	Winkler	✓	✓	✓	✓	–	–	✓	✓	✓	✓	–	–	–	–	–
AoPS: Intermediate Algebra	Rusczyk, Crawford	✓	–	–	–	–	–	✓	✓	✓	✓	–	–	–	–	–
First/Second Step to Mathematical Olympiad Problems	Holton	✓	✓	✓	✓	–	–	✓	✓	✓	✓	–	–	–	–	–
Think Like a Mathematician	Houston	✓	✓	✓	✓	–	–	–	✓	✓	✓	–	–	–	–	–

Continued from previous page																
Title	Author	A	C	G	N	CL	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
Intro to Inequalities	Beckenbach et. al	✓	-	-	-	-	-	-	✓	✓	✓	-	-	-	-	-
The Art and Craft of Prob. Solving	Zeit	✓	✓	-	✓	-	-	-	✓	✓	✓	-	-	-	-	-
AoPS Volume 2: And Beyond	Rusczyk, Lehoczky	✓	✓	✓	✓	-	-	-	✓	✓	✓	-	-	-	-	-
A Problem Book in Algebra	Krechmar	✓	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-	-
A Concise Intro to Pure Maths	Liebeck	✓	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-	-
AoPS: Intermediate Counting and Probability	Patrick	-	✓	-	-	-	-	-	✓	✓	✓	✓	-	-	-	-
AoPS: Precalculus (ch. 1-8)	Rusczyk	✓	-	✓	-	-	-	-	✓	✓	✓	-	-	-	-	-
Lecture Notes on Math. Olympiad Courses, Senior (vols. 1 & 2)	Xu (Jiagu)	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Problems Of Number Theory In Mathematical Competitions	Yu (Hongbing)	-	-	-	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Path to Combi. for Undergrads	Andreescu, Feng	-	✓	-	-	-	-	-	-	✓	✓	✓	-	-	-	-
250 Probs in Elem Number Theory	Sierpinski	-	-	-	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Bridge to Higher Mathematics	Vandervelde	✓	✓	-	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Principles & Techniques in Combi.	Chong, Meng	-	✓	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Advanced Problems in Math.	Siklos	-	-	✓	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Advanced Euclidean Geometry	Johnson	-	-	✓	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Episodes in 19th and 20th Century Euclidean Geometry	Honsberger	-	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Solving Mathematical Problems	Tao	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Mathematical Problem Solving	Li (Kin Yin)	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
College Geometry	Altshiller-Court	-	-	✓	-	-	-	-	-	✓	✓	✓	✓	-	-	-
103 Trigonometry Problems	Andreescu, Feng	✓	-	✓	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Probs in Plane, Solid Geom (ch 1-6)	Prasolov, tr. Leites	-	-	✓	-	-	-	-	-	✓	✓	✓	✓	-	-	-
102 Combinatorial Problems	Andreescu, Feng	-	✓	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Discrete Math: An Open Intro.	Levin	-	✓	-	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Combinatorics, Guided Discovery	Bogart	-	✓	-	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
104 Number Theory Problems	Andreescu, Feng	-	-	-	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Mathematical Olympiad Treasures	Andreescu, Gelca	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Mathematical Olympiad Challenges	Andreescu, Gelca	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Geom Probs on Maxima & Minima	Andreescu et. al	-	-	✓	-	-	-	-	-	✓	✓	✓	-	-	-	-
Problem Solving Strategies	Engel	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Problem Solving Through Problems	Larson	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Mathematics for Computer Science	Lehman et. al	✓	✓	-	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Olympiad Number Theory Through Challenging Problems	Stevens	-	-	-	✓	-	-	-	-	✓	✓	✓	-	-	-	-
Geometry Revisited (ch. 1-3)	Coxeter	-	-	✓	-	-	-	-	-	✓	✓	✓	-	-	-	-
Rigorous Elementary Math (4 vols)	Seraj	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
101 Problems in Algebra	Andreescu, Feng	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Intro to Functional Equations	Efthimiou	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Inequalities: a Math Oly Approach	Manfrino et. al	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-
Number Theory: Structures, Examples, Problems	Andrica, Andreescu	-	-	-	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Problem Solving Tactics	Pasquale et. al	✓	✓	✓	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Concrete Mathematics	Graham et. al	✓	✓	-	✓	-	-	-	-	✓	✓	✓	✓	-	-	-
Machine Proofs in Geometry	Chou et. al	-	-	✓	-	-	-	-	-	✓	✓	✓	-	-	-	-

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Title	Author	A	C	G	N	CL	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
Beautiful Journey Thru Oly Geom.	Lozanovski	-	-	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	-
Mathematical Induction	Andreescu, Crisan	✓	✓	-	✓	-	-	-	-	-	-	✓	✓	✓	✓	-
107 Geometry Problems	Andreescu et. al	-	-	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	-
Secrets in Inequalities (vol. 1)	Hung	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	-
Functional Equations (Online Ed.)	Andreescu, Boreico	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	-
Elementary Number Theory	Burton	-	-	-	✓	-	-	-	-	-	-	✓	✓	✓	✓	-
Sums and Products	Andreescu, Tetiva	✓	✓	-	✓	-	-	-	-	-	-	✓	✓	✓	✓	-
Euclidean Geometry in Math. Olys.	Chen (Evan)	-	-	✓	-	-	-	-	-	-	-	✓	✓	✓	✓	-
A Walk Through Combinatorics	Bona	-	✓	-	-	-	-	-	-	-	-	✓	✓	✓	✓	-
Polynomials	Barbeau	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	-
Roots to Research	Sally, Sally	✓	✓	✓	✓	-	-	-	-	-	-	✓	✓	✓	✓	✓
Num. Theory: Concepts and Probs	Andreescu et. al	-	-	-	✓	-	-	-	-	-	-	-	✓	✓	✓	✓
Olympiad Combinatorics	Sriram	-	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
OTIS Excerpts	Chen (Evan)	✓	✓	-	✓	-	-	-	-	-	-	-	✓	✓	✓	✓
Twrds Higher Math: A Companion	Earl	✓	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
Introduction to Analysis	Mattuck	✓	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
Modern Olympiad Number Theory	Khurmi	-	-	-	✓	-	-	-	-	-	-	-	✓	✓	✓	✓
Lemmas in Olympiad Geometry	Andreescu et. al	-	-	✓	-	-	-	-	-	-	-	-	✓	✓	✓	✓
Problems from the Book	Dopinescu et. al	✓	✓	-	✓	-	-	-	-	-	-	-	-	✓	✓	✓
117 Polynomial Problems	Andreescu et. al	✓	-	-	✓	-	-	-	-	-	-	-	-	✓	✓	✓
Handout in Triangle Config in Olys	i3435 (AoPS user)	-	-	✓	-	-	-	-	-	-	-	-	-	✓	✓	✓
Functional Equations Strategies	Mondal, Lapate	✓	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓
Algebraic Inequalities	Cirtoaje	✓	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓
Topics in Func Eqns (Print Edition)	Andreescu et. al	✓	-	-	✓	-	-	-	-	-	-	-	-	✓	✓	✓
Inequalities: Theorems, Techniques and Selected Problems	Cvetkovski	✓	-	-	✓	-	-	-	-	-	-	-	-	✓	✓	✓
Mathematical Olympiad Dark Arts	Goucher	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	✓	✓
Cauchy-Schwarz Master Class	Steele	✓	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Putnam and Beyond	Gelca, Andreescu	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	✓	✓
Probs in Real Analysis: Adv Calc	Radolescu et. al	✓	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Probability and Random Processes, One Thousand Exercises in Prob.	Grimmett et. al	✓	✓	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Graph Theory and Additive Comb.	Zhao (Yufei)	-	✓	-	-	-	-	-	-	-	-	-	-	-	✓	✓
The Napkin Project	Chen (Evan)	✓	-	-	✓	-	-	-	-	-	-	-	-	-	✓	✓

## 1.2 Online Content, Written

Title	Author	A	C	G	N	CL	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
cK12	Various Staff	✓	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-
Dr. Frost Maths (Downloadables)	Frost et. al	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-
MathCounts POTW Archive	Various Staff	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-
CEMC Resources	Various Staff	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-
Philipps Exeter Math Problem Sets	Various Staff	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-
VCSMS PRIME	Quines	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	-	-	-	-	-
Math. Digest (UCT Journal)	Various Staff	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	-	-	-	-	-
Cambridge STEP Support	Various Staff	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	-	-
Parabola (UNSW Sydney Journal)	Various Authors	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	✓	✓	-	-

Berkeley Math Circle Handouts	Various Authors	✓✓✓✓	- - - ✓ ✓ ✓ ✓ ✓ ✓ - -
Mathematical Excalibur	Various Authors	✓✓✓✓	- - - - ✓ ✓ ✓ ✓ ✓ - -
imomath.com Training Materials	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ -
Online Math Club	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ -
Jane Street Puzzles	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Yufei Zhao's Handouts	Zhao (Yufei)	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Canada IMO Training Handouts	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
AoPS Mega Store (Old Handouts)	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Mathematical Reflections	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Crux Mathematicorum	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Forum Geometricorum Archive	Various Staff	- - ✓ -	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Po Shen Loh's Handouts	Loh (Po Shen)	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
MIT Putnam Seminar (18.A34)	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓

### 1.3 Online Content, Video/Multimedia

Title	Author	A C G N	CL A1 A2 B1 B2 C1 C2 D1 D2 E1 E2
IMLEM Competition Lessons	Abji	✓✓✓✓	✓ ✓ - - - - - - - -
South Africa Math Foundation	Various Staff	✓✓✓✓	✓ ✓ ✓ ✓ - - - - - - -
AoPS Videos	Various Staff	✓✓✓✓	✓ ✓ ✓ ✓ - - - - - - -
OmegaLearn	Various Staff	✓✓✓✓	✓ ✓ ✓ ✓ - - - - - - -
Mathcounts Minis, Practice Plans	Rusczyk et. al	✓✓✓✓	✓ ✓ ✓ ✓ ✓ - - - - - -
Maths Olympiad Trainer	Unknown	✓✓✓✓	- - ✓ ✓ ✓ - - - - - -
Math Soc. of the Phils. YouTube	Various Staff	✓✓✓✓	- - ✓ ✓ ✓ ✓ - - - - -
Stemlab PH YouTube	Sy (Michael)	✓✓✓✓	- - ✓ ✓ ✓ ✓ - - - - -
Shefs of Problem Solving	Unknown	✓✓✓✓	- - - ✓ ✓ ✓ ✓ ✓ - - -
Little Fermat	Alhafi	✓✓✓✓	- - - ✓ ✓ ✓ ✓ ✓ - - -
Math Gold Medalist YouTube	Batani	✓✓✓✓	- - - ✓ ✓ ✓ ✓ ✓ - - -
Cut The Knot	Bogomolny	✓✓✓✓	- - - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
3Blue1Brown Puzzles Playlist	Sanderson	✓✓✓✓	- - - - ✓ ✓ ✓ ✓ ✓ ✓ ✓
Mathologer	Polster	✓✓✓✓	- - - - ✓ ✓ ✓ ✓ ✓ ✓ ✓
Summer of Math Exposition	Various Authors	✓✓✓✓	- - - - ✓ ✓ ✓ ✓ ✓ ✓ ✓
Terence Tao's Blog	Tao	✓✓✓✓	- - - - - - - ✓ ✓ ✓ ✓

### 1.4 Learning Platforms, Communities, and Programs

Title	Author	A C G N	CL A1 A2 B1 B2 C1 C2 D1 D2 E1 E2
Khan Academy	Various Staff	✓✓✓✓	✓ ✓ - - - - - - - -
AoPS MC Trainer, For the Win	Various Staff	✓✓✓✓	- ✓ ✓ ✓ - - - - - - -
AoPS Alcumus	Various Staff	✓✓✓✓	- ✓ ✓ ✓ ✓ - - - - - -
MathDash	Various Staff	✓✓✓✓	- - ✓ ✓ ✓ ✓ ✓ - - - -
Oxford Online Maths Club	Various Staff	✓✓✓✓	- - ✓ ✓ ✓ ✓ ✓ ✓ - - -
AoPS Forums	Various Staff	✓✓✓✓	- - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Math. Olympiads Discord Server	Various Staff	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Oly. Training for Indiv. Students	Chen (Evan)	✓✓✓✓	- - - - - ✓ ✓ ✓ ✓ ✓ ✓
Euler Circle	Various Staff	✓✓✓✓	- - - - - - - ✓ ✓ ✓ ✓
MIT PRIMES CrowdMath	Various Staff	✓✓ - ✓	- - - - - - - ✓ ✓ ✓ ✓

## 2 $\approx$ 250 Practice (Con)tests, Sorted by Level

### Level CL Suggestions

#### Level CL, Elementary

1. [CAN] Abel Contest, Burnaby
2. [SGP] Singapore Exams, Primary 1-6

#### Level CL, Junior

1. [UNK/INTL] (I)GCSE, O-Levels Math
2. [USA] New York Regents Math (all subjects)
3. [SGP] Singapore Sec 3/O-level Elementary Math
4. [USA] SAT Math Section

#### Level CL, Senior

1. [AUS] New South Wales General Math
2. [CAN] Manitoba Precalculus Exam
3. [IND] CBSE Class 10 Math
4. [NZL] NCEA (Nat'l Cert) Algebra Exam
5. [USA] SAT Math Section
6. [SGP] Singapore Sec 3/O-level Additional Math
7. [ZAF] Nat'l Senior Cert Math, Technical Math

#### Level CL, Advanced

1. [INTL] IB Math Analysis and Approaches HL
2. [NZL] NCEA (Nat'l Cert) Calculus Exam
3. [UNK/INTL] A Level Math, Further Math
4. [USA] AP Calculus BC FRQ
5. [SGP] Singapore A-Level Math

### Level A Suggestions

#### Level A1, Elementary

1. [INTL] Kangaroo Math (Benj/Kadet)
2. [INTL] Chiuchang IMAS Middle Pri., First Rd
3. [AUS] Australian Math Comp (Middle Primary)
4. [CAN] ELMACON (UBC) Math Contest
5. [CAN] Gauss Math Contest (Grades 7-8)
6. [IND] Assam Math Olympiad, Category I
7. [UNK] UKMT Junior Kangaroo
8. [UNK] UKMT Junior Math Challenge
9. [USA] Intermediate Math League Exam
10. [USA] MathCounts School/Chapter Rounds
11. [ZAF] Horizon Mathematics Contest
12. [ZAF] SA Mathematics Challenge (Gr 4-7)
13. [ZAF] Wits Math Competition (Mid Primary)

#### Level A1, Junior

1. [INTL] Chiuchang IMAS Junior, First Rd
2. [INTL] MathDash Training Minis, Level I
3. [AUS] WA Junior Mathematics Olympiad
4. [CAN] Calgary Junior Math Contest
5. [CAN] Pascal/Cayley/Fermat Contests
6. [CAN] Nova Scotia Mathematics League
7. [IND] Assam Math Olympiad, Category II

8. [UNK] UKMT Intermediate Math Challenge
9. [UNK] UKMT Intermediate Kangaroo
10. [USA] AMTNJ High School Math Contest
11. [USA] Joe Holbrook Memorial Math Comp
12. [USA] Univ of North Alabama Math Contest

#### Level A1, Senior

1. [HKG] HK DSE/CE Mathematics Exams
2. [PHI] Philippine MO Nationals – Oral Phase
3. [UNK] UKMT Senior Math Challenge
4. [UNK] UKMT Senior Kangaroo
5. [USA] Massachusetts Mathematics League
6. [USA] SVSU Mathematics Olympics

#### Level A2, Elementary

1. [INTL] Chiuchang IMAS Middle Pri., Second Rd
2. [INTL] Primary Mathematics World Contest
3. [INTL] Intl Math & Science Olympiad (Math)
4. [INTL] Kangaroo Math (Junior/Student)
5. [INTL] WMTC Junior Link 1 Link 2 Link 3
6. [AUS] Australian Math Comp (Junior)
7. [USA] American MC Grade 8
8. [USA] MathCounts State/National Rounds
9. [USA] Purple Comet (Middle School)

#### Level A2, Junior

1. [INTL] MathDash Training Minis, Level II
2. [CAN] Alberta HS Math Comp (Part 1)
3. [CAN] Fryer/Galois/Hypatia Contests (CEMC)
4. [CAN] Manitoba Math Contest
5. [HKG] Pui Ching Invitational (Sec 4)
6. [HUN] Komal Journal Problems (Level K)
7. [NOR] Norway (Abel) Math Olympiad, Round 1
8. [USA] Harker Mathematics Invitational
9. [USA] Montgomery Blair Math Tournament
10. [USA] Lexington Math Tournament
11. [USA] NYC Interscholastic Math League
12. [USA] Univ. Georgia HS Math Tournament
13. [SGP] Singapore Math Olympiad Junior Rd 1
14. [ZAF] Wits Math Competition (Snr Secondary)

#### Level A2, Senior

1. [NZL] Auckland Mathematical Olympiad
2. [USA] Connecticut State Math League
3. [USA] New England Assoc Math League
4. [USA] Mu Alpha Theta Nat'l Convention ( $\alpha, \theta$ )
5. [USA] North Carolina State Math Contest
6. [USA] Univ. Maryland HS Math Comp (Pt 1)
7. [USA] Univ. South Carolina HS Math Comp
8. [USA] Texas A&M HS Math Contest (DE level)

### **Level A, Nonstandard/Advanced**

1. [JPN] Japanese Univ Intl Admit Exam, Math
2. [UNK] Trinity Cambridge CS Admissions Test
3. [UNK] Test of Math for Univ Admission

### **Level B Suggestions**

#### **Level B1, Elementary**

1. [INTL] Asia-Pacific MO for Primary Schools
2. [INTL] Beaver (Bebras) Computing Challenge
3. [INTL] Chiuchang Elementary Math Intl Contest
4. [SGP] Raffles Mathematical Olympiad (RMO)
5. [SGP] Raffles Primary Math World Contest
6. [UNK] UKMT Junior Mathematical Olympiad
7. [USA] Mathworks (Texas State) Math Contest

#### **Level B1, Junior**

1. [INTL] Chiuchang IMAS Junior, Second Round
2. [INTL] WMTC Intermed. Link 1 Link 2 Link 3
3. [AUS] Australian Math Comp (Senior)
4. [AUT] Austria Junior Regional MO
5. [CAN] W. J. Blundon Contest
6. [DNK] Georg Mohr MO Round 2
7. [HKG] Hong Kong YMHASC
8. [IND] Assam Math Olympiad, Category III
9. [NLD] Dutch Math Olympiad Round 1
10. [NOR] Norway (Abel) Math Olympiad, Round 2
11. [USA] Manhattan Math Olympiad (KSU)
12. [USA] American MC Grade 10
13. [USA] Acton-Boxborough Math Competition
14. [USA] Canyon Crest Academy Math Bonanza

#### **Level B1, Senior**

1. [INTL] MathDash Training Minis, Level III
2. [INTL] Intl Young Math Convention
3. [INTL] WMTC Advanced Link 1 Link 2 Link 3
4. [AUS] Australian Intermediate Math Oly.
5. [CAN] Canadian Interm/Senior (CEMC)
6. [CAN] Canadian Team Contest (CEMC)
7. [HUN] Komal Journal Problems (Level C)
8. [PHI] Philippine Math Oly., Qualifying Stage
9. [USA] American MC Grade 12 (+ Mock Exams)
10. [USA] CSU Invitational Math Tournament
11. [USA] NY State Mathematics League
12. [SGP] Singapore Math Oly. Senior Round 1

#### **Level B2, Junior**

1. [INTL] Chiuchang IWYMIC
2. [INTL] May Olympiad (both levels)
3. [AUS] Blakers Mathematics Competition
4. [CAN] Alberta HS Math Competition (Pt 2)
5. [EST] Estonia Math Competition Open Contest
6. [NLD] Dutch Math Olympiad Round 2

7. [CAN] Canadian Junior Math Olympiad (#1-2)
8. [USA] Exeter Math Club Competition
9. [USA] Georgia Tech HS Math Day
10. [USA] Lehigh University HS Math Contest
11. [USA] Math Open at Andover (MOAA)

#### **Level B2, Senior**

1. [INTL] MathDash Training Minis, Level IV
2. [CAN] Canadian Euclid Mathematics Contest
3. [CAN] Canadian Open Mathematics Challenge
4. [HKG] JSMS HK Interschool Math Contest
5. [IND] Indian Olympiad Qualifier Math
6. [PHI] Philippine Math Olympiad, Area Stage
7. [USA] Mandelbrot Individual/Team Test
8. [USA] Michigan Math Prize Competition (Pt 2)
9. [USA] Purple Comet High School Contest
10. [USA] San Diego Honors Math Contest (Pt 2)
11. [SGP] Singapore Math Oly. Open Round 1
12. [ZAF] UCT Invitational Mathematics Challenge

#### **Level B, Nonstandard/Advanced**

1. [IND] Chennai Math Institute Entrance Exam
2. [IND] India IIT JEE Math, Main / Advanced
3. [IND] Indian Stat. Institute Entrance Exam
4. [IRL] Dublin Intervarsity Mathematics Contest
5. [UNK] Cambridge Sixth Term Exam Papers
6. [UNK] Oxford Math Admissions Test
7. [USA] MAA-NCS Team Mathematics Contest

### **Level C Suggestions**

#### **Level C1, Short Answer**

1. [INTL] MathDash Training Minis, Level V
2. [USA] American Invitational Math Exam
3. [USA] National Internet Math Olympiad
4. [USA] HMMT November Indiv Rounds
5. [HKG] Hong Kong Preliminary Selection Contest

#### **Level C1, Proof**

1. [INTL/MISC] Evan Chen MOHS 0-5 Problems
2. [INTL] Pan African Mathematics Olympiad
3. [INTL] Tourn. of Towns Junior O-Level
4. [AUT] Austria Regional/Qualifying MO
5. [IND] India Regional Mathematics Olympiad
6. [NOR] Norway (Abel) MO Final Round (AoPS)
7. [NZL] New Zealand MO (both rounds)
8. [NLD] Dutch Mathematical Olympiad Final
9. [SGP] Singapore MO Junior/Senior Round 2
10. [UNK] British Mathematical Olympiad Round 1
11. [USA] Colorado (Soifer) Math Olympiad
12. [USA] Univ of Maryland HS Math Comp Pt 2
13. [USA] Utah Mathematics Olympiad
14. [USA] Berkeley Math Circle Monthly

## Level C2, Short Answer

1. [KOR] Korean Mathematical Olympiad Round 1
2. [USA] American Regions Mathematics League
3. [USA] Berkeley Math Tourn, Indiv Tests
4. [USA] Caltech Math Meet Indiv Round
5. [USA] CMIMC Indiv/Team Rounds
6. [USA] Harvard-MIT MT February, Indiv/Guts
7. [USA] Math Prize for Girls, First Round
8. [USA] Online Math Open (Archived)
9. [USA] PuMAC Indiv/Team Rounds
10. [USA] Stanford Math Tourn, Indiv Tests

## Level C2, Proof

1. [INTL] Asian-Pacific MO,  $\mu \geq 4.50$
2. [INTL] Centroamerican Math Olympiad
3. [INTL] Cono Sur Olympiad
4. [INTL] European Mathematical Cup, Junior
5. [INTL] Francophone MO, Junior Level
6. [INTL/USA] Evan Chen MOHS 10 problems
7. [INTL] Iranian Geometry Oly., Intermediate
8. [INTL] Junior Balkan MO + shortlists ("SHL")
9. [INTL] JBMO TST, Baraje Junioro (Alte Tari))
10. [INTL] Tourn. of Towns Senior O-Level
11. [INTL] Tuymaada Olympiad, Junior
12. [AUS] Australian Mathematics Olympiad
13. [AUT] Austria National MC Final Round 1
14. [CAN] Canadian Math Olympiad Repechage
15. [CZE] Czech-Slovak Math Olympiad Rounds 1-2
16. [EST] Estonia Math Competition Final Round
17. [HKG] Hong Kong IMO Team Selection Test 1
18. [HUN] Komal Journal Problems Level B
19. [IND] India National Mathematics Olympiad
20. [LTU] Lithuania Baltic Way TST (Solutions)
21. [MEX] Mexican Math Olympiad
22. [PHI] Philippine Math Olympiad, National Stage
23. [USA] USA Mathematical Talent Search
24. [USA] Bay Area Mathematics Olympiad 12
25. [USA] Mathematical Reflections Junior Probs
26. [RUS] Sharygin Geometry Olympiad (Grade 8)

## Level C, Nonstandard/Advanced

1. [INTL] Atcoder Regular Contest 300-600pt
2. [INTL] Codeforces Math Tag 1600-2100 Rating
3. [INTL] Simon Marais Math Competition
4. [RUS] Sharygin Geometry Olympiad (Grade 11)
5. [UNK] Cambridge Tripos Part 1A Exams
6. [USA] Berkeley Math Tourn. Power Round
7. [UNK] Imperial-Cambridge Math Competition
8. [USA] MathCamp Qualifying Quizzes
9. [USA] Stanford Math Tourn Power Round
10. [USA] Virginia Tech Regional MC

## Level D Suggestions

### Level D1, Standard

1. [INTL] Balkan Mathematical Olympiad, #1-2
2. [INTL] Asian-Pacific MO,  $4.50 > \mu \geq 1.50$
3. [INTL] Baltic Way Math Competition
4. [INTL] Caucasus Math Olympiad (AoPS)
5. [INTL] European Girls Math Olympiad
6. [INTL/USA] Evan Chen MOHS 15 problems
7. [INTL] IMO Shortlists, #1-2 of each subject
8. [INTL] Mathematical Reflections, Senior Probs
9. [INTL] Mediterranean Math Olympiad
10. [INTL] Tourn. of Towns Junior A-Level
11. [INTL] Tuymaada Olympiad, Senior
12. [AUT] Austria National MC Final Round 2
13. [CAN] Canadian Math Olympiad
14. [CHN] China Girls Math Olympiad
15. [CZE] Czech-Slovak Math Olympiad Final Rd
16. [HKG] Hong Kong IMO Team Selection, Test #2
17. [SUI] Swiss Math Olympiad Final Round
18. [THA] Thailand Math Oly, Thailand TSTST
19. [USA] Math Prize for Girls Olympiad

### Level D2, Standard

1. [INTL] Balkan Mathematical Olympiad, #3-4
2. [INTL] Benelux Math Olympiad
3. [INTL] Evan Chen MOHS 20-25 problems
4. [INTL] Iberoamerican Math Olympiad
5. [INTL] Francophone MO, Senior Level
6. [INTL] IMO Shortlists, #3-4 of each subject
7. [INTL] Mathematical Reflections, Oly. Probs
8. [INTL] Middle European MO (AoPS)
9. [INTL] Tourn. of Towns Senior A-Level
10. [INTL] International Zhautykov Olympiad
11. [CHN] China Southeast, Western MO
12. [DNK] Nordic Mathematical Contest
13. [HKG] China (Hong Kong) Math Olympiad
14. [SGP] Singapore MO Open Rd 2
15. [TWN] Taiwan TST Round 1 Quizzes
16. [UNK] British Mathematical Olympiad 2
17. [USA] Caltech Harvey Mudd MC Proof Round
18. [USA] HMMT February Team Round

### Level D, Nonstandard/Advanced

1. [INTL] Atcoder Reg./Grand Contest 700-1000pt
2. [INTL] Codeforces Math Tag 2200-2700 Rating
3. [INTL] IMC for Univ Students, #1-3
4. [INTL] Mathematical Reflections, Undergrad
5. [USA] MIT PRIMES Admissions Problem Set
6. [USA] PuMAC Indiv Finals, Power Round
7. [USA] Putnam Math Competition, A/B #1-3