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ISEE Upper Level Math Checklist

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Checklist For Upper Level	
Knowledge Module	**Knowledge Point Requirement**
Numbers and Operations	• classify, perform operations on, make reasonable estimates of, and compare whole numbers, integers, rational numbers, irrational numbers, real numbers and complex numbers • perform operations on matrices and vectors, and compute combinations and permutations
Algebra	• understand relations and functions when presented as symbolic equations, graphs, and tables • model real-world situations using symbolic equations and graphs; and • use symbolic manipulation to determine equivalent expressions, equations, and inequalities

ISEE Upper Level Math Checklist

Checklist For Upper Level	
Knowledge Module	**Knowledge Point Requirement**
Geometry	• classify and describe basic 2- and 3-dimensional figures • understand and use coordinate grids, including transformation of geometric figures • understand the concepts of congruency, symmetry, and similarity
Measurement	• understand and use formulas for the area, surface area, and volume of geometric figures, including cones, spheres, and cylinders • make decisions about units and scales that are appropriate for problem situations involving measurement
Data Analysis and Probability	• collect, display; interpret, and make predictions about a set of data • calculate mean, mode, median, range, standard deviation, and first and third quartiles of a set of data • calculate probabilities and expected values

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Upper Elementary Math Program

Think Academy Elementary Math Program is designed for K to Grade 5 students, offering a professional, systematic, and comprehensive year-round curriculum based on North American learning standards. The program is divided into two main systems:**School Curriculum Track and Competition Track.**

- The School Curriculum Track is divided by students' progress and ability:
  - Core+：Aligned with school curriculum; with solid foundations and steady improvement
  - Honors：One year ahead; consistent A grades and readiness for accelerated programs
  - Challenge：1.5–2 years ahead; full mastery of AP-level math with moderate enrichment

1–2 years ahead of Common Core, aligning with both private school entrance exams (MAP, ISEE, SSAT) and public school assessments (STAR Math, i-Ready, IOWA, SBA, etc.), ensuring students maintain a strong academic edge.

- The Competition Track is divided by thinking flexibility and concept mastery:
  - ACE：Builds competition foundations, strengthens problem-solving skills, and helps Grade 5 students reach AMC 8 Honor Roll
  - ACE+：Intensive training for advanced Olympiad pathways and higher-level competitions

Covers core knowledge points from Math Kangaroo (Grades 1–4) and AMC 8 (Grades 4–8), develops both reasoning and competition skills, promoting excellence in school academics and contests for long-term growth.!

The tiered class structure ensures every student finds a fit. All cover the seven core modules of elementary mathematics—Computation, Geometry, Number Theory, Applications, Counting and Probability, Algebra, and Combinatorics—**with differences only in pace and depth.**

	Elementary School									Middle School		
Grade	G3			G4			G5			G6		
Semester	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring
Core+	Math 3			Math 4			Math 5			Math 6		
Honors	G3 Honors			G4 Honors			G5 Honors			Pre-Algebra		
Challenge	G3 Challenge			G4 Challenge			G5 Challenge			Algebra 1		Intro to Geometry
ACE	G3 ACE			G4 ACE			G5 ACE			AMC8 HR		AMC10 Intro

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Middle School Math Program

Think Academy’s Middle School Long-Term Math Program is designed for Grades 6–9, offering a professional, systematic, and comprehensive year-round curriculum tailored to North American students. The program includes four tracks: Core+, Honors, Challenge, and Competition.

Core+（School Curriculum Track）： Focuses on previewing and reinforcing key concepts through targeted practice, helping students easily achieve A grades in school math at their current grade level.

Honors（Accelerated Advancement Track）： One year ahead of standard pace, matching the fastest public-school classes. It deepens understanding and aims for placement in advanced tracks, completion of 5 AP STEM courses before graduation, and perfect SAT/ACT Math scores.

Challenge： Two years ahead of standard pace, covering Algebra 1, Geometry, and Algebra 2 in two years. Align with top private schools, preparing students to complete 8 AP STEM courses and get perfect SAT/ACT Math results by graduation.

Competition： Design around the AMC syllabus, build competitive math skills through advanced, contest-level topics. Taught by an experienced coaching team with a proven record of training AMC and AIME winners, it helps students qualify for AIME by Grades 8–9.

	Year 1			Year 2			Year 3			Year 4			Year 5		
	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring
Core+	Math 6/7a			Math 7b/8			Algebra 1			Geometry			Algebra 2		
Honors	Pre-Algebra			Algebra 1			Geometry			Algebra 2/ Trigonometry			Pre-Calculus		
Challenge	Pre-Algebra+			Algebra 1		Intro to Geo	Geometry		Algebra 2	Trig	Pre-Calculus		AP Calculus		
Competition				AMC 8 HR		AMC 10 Introduction			AMC 10 AIME qualify			AMC 12+ AIME			

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Middle School Competition Track Student Results

2022-2024 AMC8 Number of Students Awarded:

456
Achievement Roll
(Lower Grade Achievement Award)

397
Honor Roll
(National Top 5%)

134
DHR
(National Top 1%)

2022-2024 AMC10 Number of Students Awarded:

304
AIME Qualification
(National Top 7%)

187
Honor Roll
(National Top 5%)

45
DHR
(National Top 1%)

2024 Think Global IMO Award Winner

7 Golds 1 Silver

Ranked first globally in total gold medals.

International Mathematical Olympiad
Foundation Bronze Sponsor

Think Academy is an official partner of the International Mathematical Olympiad (IMO)

Why Think Academy Competition Courses Trained Thousands of Award-Winning Students?

1 One-Stop Professional System for Math Competitions

Think Competition follows the AMC syllabus and aligns with students' learning pace. **Grades 5–6 focus on AMC 8**, while **Grades 7–8 focus on AMC 10**. The curriculum covers the four core modules of math competitions — Algebra, Geometry, Number Theory, and Counting & Probability — enabling students to achieve one competition milestone each year and **complete AMC 10 preparation before high school, successfully qualifying for AIME**.

2 Expert Coaches. Top Results. Proven Success.

Think Competition courses are taught by **instructors with many years of competition teaching experience**, enabling students to master complex contest concepts efficiently and with ease.

James
Upenn - 5 YOE

Dennis
Duke - 4 YOE

Yichen
Columbia - 4 YOE

3 Collaborate and Excel with Outstanding Peers

Each year, the Competition Track begins with an entrance assessment to ensure students learn alongside peers of similar ability. This structure makes preparation more engaging and collaborative, as students motivate one another and grow together throughout the journey.

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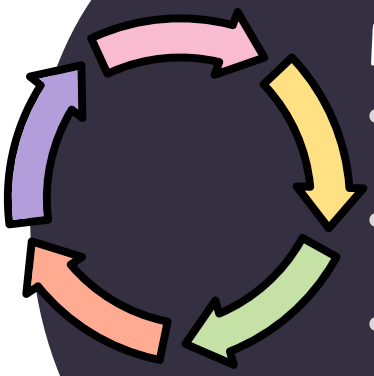
Course Highlights

Clear Structure, Worry-Free for Parents

Personalized Learning Plans with Full Progress Tracking

- **Before Enrollment:** Teachers create **personalized study plans** based on each student' s goals and ability
- **During Learning:** Teachers give **regular feedback and targeted advice**, helping parents track progress
- **Mid-Term & Final Evaluations**: **Parent meetings** and updated study plans ensure steady improvement



Weekly Learning Cycle to Ensure Steady Progress

- **Pre-Class Preparation: 15-minute preview** to review key concepts and prepare for new lessons
- **Homework: Assigned after each class**, with teacher feedback shared with parents
- **Office Hour: Free live sessions** to review and clarify difficult problems
- **Homework Review Videos:** Each homework question includes a **detailed video explanation** for easy review

Year-Round Learning Support

- **Year-round Parent App service** providing fast responses
- Through the Parent App, parents get **direct contact with teachers** for efficient communication and real-time progress updates
- Instant online homework help for **timely learning support**

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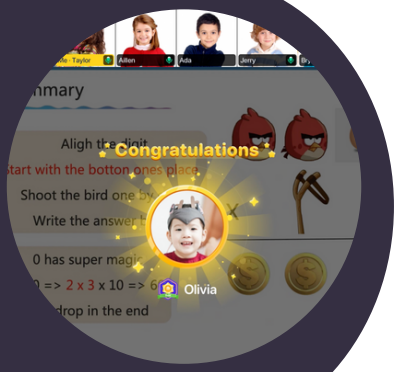
Course Highlights

Happy Learning, Better Results

Thoughtfully Crafted Lessons Inspire a Love for Math

- **Interactive games and scenario-based teaching** make math fun and engaging
- **Gold coin reward system** lets students exchange coins for prizes, motivating them to complete learning tasks actively



Self-Developed Learning App Enhances Every Online Class

- **Think Academy learning app** enhances in-class interaction with hand-raising, polls, and group activities —**keeping students engaged every three minutes**
- Teachers **track progress in real time** for an effective learning experience

A Sense of Achievement Builds Intrinsic Motivation

- Students learn efficiently in class and get **full after-class support** with detailed homework videos and free weekly Office Hours.
- Students **gain higher grades, faster progress**. They are naturally motivated to put more effort in STEM learning and become **confident math learners**