

Quick summary

If you need a one-line comparison: Brilliant.org is an interactive, intuition-first platform that excels at engagement and quick conceptual practice; AoPS (Intro to Prealgebra, Prealgebra, Intro to Geometry) is a rigorous, theory- and problem-solving-focused path intended to build deep mathematical thinking and contest-level skills. Both can work well in a homeschool setting, but they serve different students and different goals.

Step 1 – What each resource is and its teaching approach

- **Brilliant.org:** Subscription-based, interactive lessons with short modules, visual widgets, immediate feedback, and progressive difficulty. Emphasizes intuition, discovery, and bite-sized practice. Lessons are often puzzle-like and guided, with hints and short solutions. Best for developing conceptual understanding and daily practice.
- **AoPS (Intro to Prealgebra, Prealgebra, Intro to Geometry):** AoPS provides textbooks and instructor-led online courses. The style is proof-oriented and problem-solving heavy, with many non-routine problems, theory development, and emphasis on mathematical thinking (not just procedure). AoPS material prepares students for math competitions and strong secondary mathematics courses.

Step 2 – Content and scope

- **Intro to Prealgebra (AoPS):** Targets younger middle-school students or those new to contest-style thinking. Covers number theory foundations, arithmetic structure, basic combinatorics, and introduces problem-solving heuristics.
- **Prealgebra (AoPS):** Deeper than an average school prealgebra course—more proofs, tougher word problems, and richer topics (factors, exponents, ratios, basic algebraic reasoning, simple counting arguments).
- **Intro to Geometry (AoPS):** Focuses on Euclidean geometry reasoning, proofs, diagram-based problem solving, and contest-style geometry problems. Emphasizes logical structure and rigorous justification.
- **Brilliant Prealgebra/Geometry content:** Covers the same broad topic areas (number sense, basic algebraic reasoning, introductory geometry), but in smaller interactive chunks. Geometry content often uses diagrams and interactive visualizations and focuses on building intuition and computational skills rather than formal proofs.

Step 3 – Level and student fit

- **Best for motivated, advanced, or competition-aimed students:** AoPS. If a student enjoys challenging, non-routine problems, wants deep conceptual mastery, or is preparing for contests (MATHCOUNTS, AMC), AoPS is ideal.
- **Best for curious self-learners, visual learners, or those who need engagement:** Brilliant. Students who like puzzles, short daily practice, or interactive learning will thrive here.
- **Best for students who struggle with abstractions:** Start with Brilliant for hands-on intuition; then add AoPS problems gradually. AoPS can feel fast and abstract without guided support.

Step 4 – Pedagogy, pacing, and assessment

- **Pacing:** Brilliant is self-paced with micro-lessons suitable for 10–30 minute daily practice. AoPS textbooks/courses are paced by terms or teacher schedules—slower reading and deeper

problem sets per chapter.

- **Assessment & tracking:** Brilliant has built-in progress metrics and mastery streaks. AoPS offers problem sets, graded assignments in instructor-led classes, and self-check solutions in books; parents must track mastery for homeschool records.
- **Depth of explanation:** Brilliant gives guided hints and short solutions. AoPS gives extended solutions and reasoning—often multiple solution methods and exposition of problem-solving strategies.

Step 5 — Community and support

- **Brilliant:** Community in comments and some discussion but primarily individual learning. Support is product-facing rather than mentorship.
- **AoPS:** Very active community forum, teachers for online classes, and many community solutions. The AoPS community is a big advantage if the student likes discussing deep problems and seeing many solution styles.

Step 6 — Cost and materials

- **Brilliant:** Monthly/annual subscription for full access. Everything is online; no required textbooks.
- **AoPS:** Textbooks can be bought outright (excellent for homeschoolers who want an offline curriculum). Online classes are term-based and priced per course. The AoPS community and many resources (forum) are free.

Step 7 — Pros and cons

- **Brilliant pros:** Highly engaging, immediate feedback, good for conceptual intuition, flexible, great daily habit-builder.
- **Brilliant cons:** Less formal; not focused on proofs or extended problem sets; may not push to competition level by itself.
- **AoPS pros:** Deep problem-solving training, rigorous exposition, excellent textbooks for self-study, strong community and teacher support.
- **AoPS cons:** Can be intimidating for average students, requires more parental/teacher involvement, and pacing can be slower or denser than typical grade-level curricula.

Step 8 — How to combine them for homeschool use (practical plan)

1. Assess your student: curiosity level, prior skills, and goals (standard mastery vs contest prep).
2. If the student is new or resistant, start with Brilliant for 10–20 minutes/day to build interest and core intuition.
3. After 3–6 months, add an AoPS textbook (Intro to Prealgebra or Prealgebra) as the main spine: read a chapter a week, do selected AoPS problems (10–20 problems/week), and use Brilliant modules as warm-ups and review.
4. For geometry, use Brilliant's visual modules alongside AoPS Intro to Geometry problems. AoPS will give the formal proofs; Brilliant will give visual intuition and practice.
5. Use AoPS online classes or community only if you want instructor feedback or peer interaction; otherwise use the books plus selected forum threads for help.

Step 9 – Sample weekly schedule

- Mon–Fri: 15 minutes Brilliant practice (concept + 5–10 problems/hints).
- Tues/Thurs: AoPS textbook reading (one section) + attempt 3–5 AoPS problems with written solutions.
- Weekly: One challenging AoPS problem to discuss with parent/peer; log solutions for transcript/mastery.

Final recommendations

For homeschoolers who want a rigorous, long-term math foundation and possibly competition prep, AoPS (Intro to Prealgebra, Prealgebra, Intro to Geometry) should be the core. For students who need motivation, visual intuition, or shorter daily practice that builds habits, Brilliant is an excellent primary or supplemental tool. The two complement each other well: Brilliant for fast, intuitive practice and AoPS for depth, proofs, and advanced problem-solving.

If you tell me the student's age, current level, and goals (college prep, contests, general mastery), I can suggest a customized 6–12 month homeschool sequence that combines these resources and gives exact weekly assignments.