

You will not tiptoe through this. This accelerated plan uses Richard Rusczyk's Introduction series—Prealgebra, Introduction to Algebra, Introduction to Geometry—paired with Alcumus practice and the free AoPS video library. The philosophy is simple: mastery through struggle. Each chapter begins with problems; do them first without peeking. Struggle deliberately for at least 30 minutes before consulting hints. Read the text only after you have attempted problems; the exposition is a tool to codify the techniques you discover. Expect to internalize number theory, exponent laws, fractions, linear and quadratic techniques, ratios, percents, square roots, similarity, congruence, circle theory, power of a point, basic trig, and discrete topics like counting and probability. You will maintain an error log: record every problem you miss with a one-paragraph explanation of the mistake and the correct strategy. Use the solutions manual only to confirm logic—never to shortcut learning. Aim for depth: solve harder versions of each problem until the technique is automatic.

Schedule and pacing are non-negotiable. Target 8-12 hours per week of mixed study: 3-5 hours reading and guided problem attempts from the textbook, 3-5 hours Alcumus adaptive practice (focus on weak topics until mastery), and 1-2 hours reviewing video lessons that clarify stubborn concepts. Accelerated timeline: Prealgebra = 2-3 months, Introduction to Algebra = 4-5 months, Introduction to Geometry = 4-5 months if you stay disciplined. Weekly routine: two focused study blocks of 90-120 minutes on weekdays and a 3-4 hour review+problem session on the weekend. Every 4 weeks take a timed assessment: 40-60 questions drawn from past Alcumus performance and textbook problem sets; simulate contest timing occasionally. If you miss >15% on the assessment, repeat the month's cycle with heavier reinforcement until the error log shrinks.

Practice quality outranks quantity. For each chapter, complete selected core problems, then 30-50 additional challenge problems chosen from the book and Alcumus. Emphasize proof writing in geometry problems: state givens, define variables, and justify every step. Build a weekly rotation: two days for algebra techniques, two days for geometry or spatial reasoning, one day for number theory/discrete problems, and daily 20-minute review of past error-log items. Track metrics: Alcumus mastery percentage, timed assessment score, and number of error-log repeats. For contest-oriented goals (AMC, AIME), transition halfway through Algebra to more proof-heavy and combinatorics problems; increase timed practice and simulated contests. Parents and coaches: enforce schedule, check the error log weekly, and demand explanations of missed problems out loud—students learn fastest when they must teach back what they failed to solve. No excuses; work until the strategies become reflexive.