

CPS

Cambridge Public Schools

Grade 7 & 8 Math

Students in 7th and 8th Grade now have choices about how to approach their mathematics education.

CPS offers two options for pacing and course sequencing:

- **On Grade Level Math:** A rigorous math program that is aligned with state and national standards for quality math education.
- **Accelerated Math:** A faster-paced math program that allows students to complete three years of math study in two years.

While some students love math and can't wait to learn more, others learn best with more time to investigate concepts in-depth. Which choice will be right for you? We hope this brochure will help answer that question!



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Which Pathway is Right for Me?

At the end of 6th Grade, students receive a letter recommending them for Grade Level Math or Accelerated Math. These recommendations will be based on the following criteria:

1. Math Course Grade
2. 5th Grade Math PARCC Scores
3. 4th Grade Math MCAS Scores
4. The observations and recommendations of 6th Grade math teachers
5. A norm-referenced assessment called the “Iowa Algebra Readiness Test”

Each of these factors will be weighed by teachers in order to make recommendations that reflect research-based predictions about algebra readiness.

Please keep in mind that research demonstrates that success in math relies on a student’s foundational skills in problem solving. Completing Algebra 1 too early, before that foundation is solid, can result in problems in math later on in high school.

Sometimes, it will be clear which pathway would be best. In cases where it’s more difficult to make a determination, teachers will speak directly with families and students to make this decision. Examples of things that families and teachers should consider are the student’s interests, preferred learning pace, and future goals as they relate to math study.

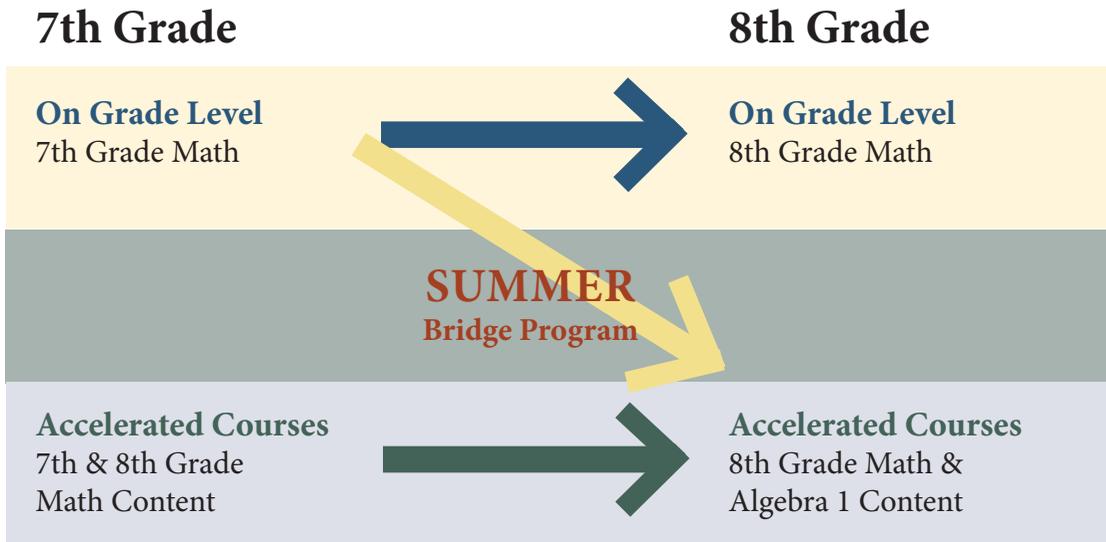


The difference between the math courses in grade 7 and 8 is pacing. The On Grade Level course addresses standards for one grade level per year; the Accelerated math course addresses 1.5 grade level equivalent standards per year.

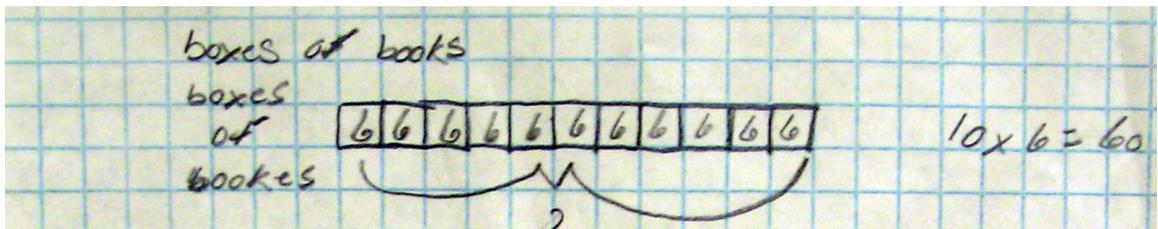
	On Grade Level	Accelerated Math
7th Grade	<ul style="list-style-type: none"> • Ratios & proportional relationships • Rational numbers • Algebraic expressions, equations, & inequalities • Scale drawings of geometric figures • Angle measure, area, surface area & volume of geometrical figures • Variability and central tendency to describe & compare data: random sampling, inferences, probability models. 	<ul style="list-style-type: none"> • Ratios and proportional relationships • Rational numbers • Algebraic equations, & inequalities • Scale drawings of geometric figures • Angle measure, area, surface area & volume of geometrical figures • Variability & central tendency to describe & compare data: random sampling, inferences, probability models. • Patterns of association in bivariate data • Transformations; translations, reflections, rotations, dilations • Congruence & similarity • Pythagorean Theorem
8th Grade	<ul style="list-style-type: none"> • The number system - Irrational numbers • Expressions & equations • Functions • Transformations; translations, reflections, rotations, dilations • Congruence & similarity • Pythagorean Theorem • Calculating the volume & surface area of three dimensional shapes; i.e., cylinders, cones and spheres • Patterns of association in bivariate data 	<ul style="list-style-type: none"> • Extend the properties of exponents to rational exponents • Application of properties of rational & irrational numbers. • Quantitative reasoning. • Seeing structure in Expressions • Arithmetic with polynomials and rational expressions • Creating equations • Reasoning with equations & inequalities • Interpreting & building functions • Functions: linear, quadratic & exponential models • Interpreting categorical & quantitative data
9th Grade	<p>Algebra 1: Offered as a full-year grade level class called “College Prep” or a 1-semester accelerated class called “Honors.” Students who take Honors Algebra may choose to take Geometry during their 2nd Semester.</p>	<p>Geometry: Offered as a full-year grade level class called “College Prep” or a 1-semester accelerated class called “Honors.”</p>

Want to switch?

Students who took On Grade Level Math in 7th Grade can move into the Accelerated Math courses for 8th Grade. The best way to do this is to complete the Summer Bridge Program, a free summer morning math tutoring program. Or, students may study independently and complete an entrance exam that includes content from the Summer Bridge program.



Students must also meet Accelerated Math entrance criteria, based on updated achievement information.



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