

enVision[®] Integrated MATHEMATICS


Bridge Connections Across Algebra and Geometry

What makes **enVision Integrated Mathematics** integrated?

- **Integrated down to the lesson level.** Throughout **enVision Integrated**, you'll find the different disciplines of math intertwined to make meaningful connections between mathematical ideas.
- **Integrated development of concepts.** The progression of topics in **enVision Integrated** is designed to develop a strong foundation in the algebra strand and to then apply algebraic concepts using geometry and statistics.
- **Integrated course sequence.** To determine which clusters and standards to include in each of the three courses, the **enVision Integrated** sequence was developed pulling from several sources, including:
 - Common Core State Standards Integrated Pathways (Appendix A)
 - State Assessment Requirements for Integrated Math
 - State Standard Sets with Integrated Sequences

EXPLORE & REASON

A developer is building three recreation areas on a parcel of land. He has not decided what to do with the enclosed triangular area in the center.



A. How can you determine the side lengths of the enclosed triangle?

B. What relationships do you notice among the areas of the squares?

C. **Look for Relationships** How can the developer adjust this plan so each recreation area has side lengths that are three times greater, but still have a...

MODEL & DISCUSS

A catering company has been asked to design bento boxes for entrees and side dishes.



A. Design a bento box that meets each of these requirements:

- Equal numbers of sections for entrees and side dishes
- More sections for entrees than for side dishes
- More sections for side dishes than for entrees

B. **Use Structure** For each bento box from Part A, write an algebraic expression to model the area of the bento boxes.

How are the core algebraic and geometric concepts developed in **enVision Integrated Mathematics**?

- **enVision Integrated I:** The first half of Integrated I is essentially what you would find in the typical first half of Algebra 1 because this is a solid, cohesive group of progressive concepts on linear and exponential functions. This lays the functional foundations for all of the high school math to come. To round out the course, algebraic concepts of lines, transformations, and functions are applied in the geometry and statistics follow.
- **enVision Integrated II:** This course begins with a strong, in-depth study of quadratic equations. In a traditional sequence, this is a topic is typically spread across Algebra 1 and Algebra 2. To ensure that students grasp the full depth and meaning, Integrated II dives deeply into quadratics. These concepts are then applied to geometric concepts, including geometric mean, Pythagorean applications, and conic sections.
- **enVision Integrated III:** This course moves towards more complex functions and advanced applications of geometry and statistics. This progression allows for a strong development of the algebra strand in a consistent instructional arc across all three courses.

INTEGRATED I	INTEGRATED II	INTEGRATED III
1. Solving Equations and Inequalities	1. Exponents and Roots	1. Linear Functions and Systems
2. Linear Equations	2. Polynomials and Factoring	2. Polynomial Functions
3. Linear Functions	3. Quadratic Functions	3. Rational Functions
4. Systems of Linear Equations and Inequalities	4. Solving Quadratic Equations	4. Rational Exponents and Radical Functions
5. Exponents and Exponential Functions	5. Quadratic Equations and Complex Numbers	5. Exponential and Logarithmic Functions
6. Foundations of Geometry	6. Working With Functions	6. Trigonometric Functions
7. Parallel and Perpendicular Lines	7. Relationships in Triangles	7. Trigonometric Equations and Identities
8. Transformations	8. Quadrilaterals and Other Polygons	8. Data Analysis and Statistics
9. Triangle Congruence	9. Similarity and Right Triangles	9. Coordinate Geometry
10. Statistics	10. Probability	10. Circles
	11. Coordinate Geometry	11. Two- and Three-Dimensional Models
	12. Circles	
	13. Two- and Three-Dimensional Models	



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