

TRUMBULL PUBLIC SCHOOLS

Trumbull, Connecticut

Honors Geometry B / Algebra II

Mathematics Department
Trumbull High School

2017

(updated 2025 for new bell schedule)

Curriculum Writing Team

Fran Basbagill	Department Chairperson
Jennifer Chirles	A House Principal
Tom Zultowski	Teacher
Elizabeth Capobianco	Teacher

Jonathon Budd - Director of Curriculum

Honors Geometry B / Algebra II

TEACHER PACING GUIDE

FIRST SEMESTER

Review

Summer Packet Review

Pretest

3 days

Unit 1: Polygons and Area

Areas of Triangles and Parallelograms

Special Right Triangles

Areas of Trapezoids, Rhombi, and Kites

Areas of Regular Polygons

*Supplement - Area of Composite Shapes

14 days with assessment

Unit 2: Volume

Prisms and Cylinders

Pyramids and Cones

Spheres

Similar Solids

6 days with assessment

Unit 3: Circles

Circumference and Area

Arcs and Central Angles

Tangent Lines

Inscribed Angles and Polygons

Areas of Sectors

9 days with assessments

Unit 4: Geometric Transformations

Review Translations and Reflections of Polygons

Rotations

Dilations

4 days with assessment

Unit 5: Algebraic Transformations

Inverse Functions with Reflections (Linear Graphs reflect over $y = x$)

Using Technology to Explore Transformations of Absolute Value, Radical, Cubic and Quadratic Functions

Classes of Functions

$f(x) + k$, $kf(x)$, $f(x)$, $f(x+k)$ with Absolute Value Functions

10 days with assessment

Unit 6: Quadratic Functions II

Graphing Quadratic Functions

Solving Quadratic Equations by Graphing

Solving Quadratic Equations by Factoring

Solving Quadratic Equations by Taking Square Roots and Complex Numbers

Quadratic Formula and the Discriminant

Completing the Square and Vertex Form

Analyzing Graphs of Quadratic Functions

Algebraic Equations of Circles

*If time – Graphing Quadratic Inequalities (done in HPC)

12 days with assessment

-----Midterm Review----- (58 days)

SECOND SEMESTER

Unit 7: Radical Functions

Radical Expressions

Rational Exponents

*Supplement change of base from 10-1

Radical Equations

Graphing Radical Equations

8 days with assessment

Unit 8: Polynomials Functions

Dividing Polynomials by Synthetic and Long Division

Factor Theorem

Graphing Polynomial Functions

Roots, Zeroes, Extrema, Symmetry, and End Behavior

9 days with assessment

Unit 9: Rational Functions

Multiplying and Dividing Rational Expressions

Adding and Subtracting Rational Expressions

Graphing Rational Functions

Solving Rational Equations

10 days with assessment

Unit 10: Piecewise Functions II

Graphing Exponential Functions with Translations

Graphing and Writing Piecewise Functions using Linear, Quadratic, Cubic, Square Root, Rational, and Exponential Functions

*Supplement – Piecewise Functions Poster Project

7 days with assessment

Unit 10: Logarithmic Functions (Independent Unit)

Exponential Functions (same base)

Exponential Growth and Decay

Logarithms and Logarithmic Functions

Properties of Logarithms

Base e and Natural Logarithms

4 days with assessment

Unit 11: Trigonometric Functions

Right Triangle Trigonometry

Angles and Angle Measures in Radians

Trigonometric Functions of General Angles

Law of Sines and Cosines

*If time – Circular Functions

*If time – Graphing Trigonometric Functions

*If time – Translations of Trigonometric Functions

14 days with assessment

-----Final Review----- (52 days)