

6th Grade Advanced Math Syllabus

School Year: 2025–2026

Instructor: Judy Seamans

Grade Level: 6th Grade Advanced Mathematics

Course Length: Full Year (2 Semesters)

Resources & Tools: IXL, Study Island, iReady Classroom 6th and 7th grade, IReady Texas 6th and 7th grade, Algebra Readiness Builders (2012), Google Classroom

Course Description

This course is designed for students in **6th Grade Advanced Math** who are preparing for Pre-Algebra and Algebra readiness. Instruction follows the **Texas Essential Knowledge and Skills (TEKS) for Grade 6** with acceleration into **7th grade readiness standards** to prepare for advanced pathways. Students will strengthen number sense, algebraic reasoning, proportionality, data analysis, and geometry skills through problem-based learning, technology integration, and real-world application.

Semester 1 and 2

TOPIC 1 Area and Volume

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| Grade 6 | Lesson 1 Find the Area of a Parallelogram |
| Grade 6 | Lesson 2 Find the Area of Triangles and Other Polygons |
| Grade 6 | Lesson 11 Solve Volume Problems with Fractions |
| Grade 7 | RTX Lesson 21 Volume of Solids |

TOPIC 2 Multi-Digit Operations and Operations with Fractions

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| Grade 6 | Lesson 7 Add, Subtract, and Multiply Multi-Digit Decimals |
| Grade 6 | Lesson 8 Divide Whole Numbers and Multi-Digit Decimals |
| Grade 6 | RTX Lesson 6 Fractions as Division |
| Grade 6 | RTX Lesson 7 Understand Division with Fractions |
| Grade 6 | RTX Lesson 8 Multiply and Divide Fractions |

TOPIC 3 Ratios and Rates

- Grade 6 *RTX Lesson 1 Ratios*
- Grade 6 *Lesson 13 Find Equivalent Ratios*
- Grade 6 *Lesson 14 Use Part-to-Part and Part-to-Whole Ratios*
- Grade 6 *Lesson 15 Understand Rate Concepts*
- Grade 6 *Lesson 16 Use Unit Rates to Solve Problems*
- Grade 7 *Lesson 2 Find Unit Rates Involving Ratios of Fractions*

TOPIC 4 Percents and Proportional Relationships

- Grade 6 *RTX Lesson 4 Ratios, Fractions, Decimals, and Percents*
- Grade 6 *Lesson 18 Use Percents to Solve Problems*
- Grade 7 *Lesson 3 Understand Proportional Relationships*
- Grade 7 *Lesson 4 Represent Proportional Relationships*
- Grade 7 *RTX Lesson 14 Measurement Conversions*

TOPIC 5 Expressions, Exponents, and One-Step Equations

- Grade 6 *RTX Lesson 16 Numerical Expressions with Exponents*
- Grade 6 *RTX Lesson 17 Algebraic Expressions and Equations*
- Grade 6 *RTX Lesson 18 Equivalent Expressions*
- Grade 6 *RTX Lesson 19 Understand Solutions to Equations*
- Grade 6 *RTX Lesson 20 Solve Equations*

TOPIC 6 Positive and Negative Numbers

- Grade 6 *Lesson 23 Understand Positive and Negative Numbers*
- Grade 6 *Lesson 24 Order Positive and Negative Numbers*
- Grade 6 *RTX Lesson 12 Understand Rational Numbers*

Grade 6 *Lesson 25 Understand Absolute Value*

Grade 6 *RTX Lesson 13 The Coordinate Plane*

Grade 7 *RTX Lesson 1 Whole Numbers, Integers, and Rational Numbers*

TOPIC 7 Operations with Rational Numbers

Grade 6 *RTX Lesson 14 Add and Subtract Positive and Negative Integers*

Grade 6 *RTX Lesson 15 Multiply and Divide Positive and Negative Integers*

Grade 7 *Lesson 8 Add with Negative Numbers*

Grade 7 *Lesson 10 Add and Subtract Positive and Negative Numbers*

Grade 7 *Lesson 12 Multiply and Divide with Negative Numbers*

Grade 7 *Lesson 14 Use the Four Operations with Negative Numbers*

TOPIC 8 Two-Variable Relationships, Two-Step Equations, and Inequalities

Grade 6 *Lesson 22 Analyze Two-Variable Relationships*

Grade 6 *RTX Lesson 23 Additive and Multiplicative Relationships*

Grade 7 *RTX Lesson 11 Understand Equations and Inequalities*

Grade 7 *RTX Lesson 12 Solve Problems with Equations*

Grade 7 *Lesson 19 Write and Solve Inequalities*

Grade 6 *RTX Lesson 25 Understand Conditions for Triangles*

Grade 7 *RTX Lesson 15 Problem Solving with Angles*

TOPIC 9 Data Distributions and Statistical Samples

Grade 6 *Lesson 29 Understand Statistical Questions and Data Distributions*

Grade 6 *RTX Lesson 29 Interpret Numeric Data*

Grade 6 *RTX Lesson 30 Display and Summarize Numeric Data*

Grade 7 *RTX Lesson 26 Using Data Representations*

Grade 7 *Lesson 23 Reason About Random Sampling*

Grade 7 *Lesson 24 Compare Populations*

Grade 6 *RTX Lesson 31 Interpret Categorical Data*

TOPIC 10 Personal Finance

Grade 6 *RTX Lesson 32 Checking Accounts*

Grade 8 *Tools for Instruction Payment Methods*

Grade 6 *RTX Lesson 33 Credit Reports*

Grade 6 *RTX Lesson 34 Paying for College*

Grade 6 *RTX Lesson 35 Annual Salaries*

Grade 7 *RTX Lesson 28 Sales and Income Tax*

Grade 7 *RTX Lesson 31 Net Worth*

Disclaimer: Sequence of lessons may be subject to change based on student needs.

Assessments

Staar Testing : Mid April

Semester Exams : End of each Semester

Tests and Quizzes administered after each Topic

Assessment Breakdown

Test grades 40%

Daily grades 60%

