

## 2023-2024 Grade 7 Advanced Mathematics Pacing Calendar

Unit 1: Introduction		
Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 1-3 August 10-25	MA.6.DP.1.1, MA.6.DP.1.4	1.1 Statistics and Interpreting Data
	MA.6.AR.3.1, MA.6.AR.3.2, MA.6.AR.3.4	1.2 Ratio Relationships
	MA.6.NSO.1.1, MA.6.NSO.1.2, MA.6.NSO.1.3	1.3 Rational Numbers and Absolute Value
	MA.6.NSO.4.1, MA.6.NSO.4.2	1.4 Operations with Integers
	MA.6.AR.2.2, MA.6.AR.2.3	1.5 Solving One-Step Equations
	MA.6.AR.2.2, MA.6.AR.2.3	1.6 Writing and Solving One-Step Equations in Real-World Contexts
		Review Unit 1
		Unit 1 Assessment
		<i>Approximately 12 Days Total</i>
Unit 2: Probability		
Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 4-5 August 28- September 8	MA.7.DP.2.1	2.1 Exploring Sample Space
	MA.7.DP.2.1	2.2 Determining Sample Space
	MA.7.NSO.1.2	2.3 Rewriting Numbers in Equivalent Forms
	MA.7.NSO.1.2	2.4 Converting Between Repeating Decimals and Fractions
	MA.7.DP.2.2, MA.7.NSO.1.2	2.5 Probability
	MA.7.DP.2.2	2.6 Comparing Probabilities
	MA.7.DP.2.3, MA.7.DP.2.4	2.7 Experimental and Theoretical Probability
	MA.7.DP.2.4	2.8 Simulating Small and Large Numbers of Trials
	MA.7.DP.2.3, MA.7.DP.2.4	2.9 Experimental and Theoretical Probabilities from Simulations
		Review Unit 2
		Unit 2 Assessment
		<i>Approximately 9 Days Total</i>

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Unit 3: Operations with Rational Numbers			
Weeks	Focus Benchmark(s)	Lesson/Topic	
Weeks 6-7 September 11- 22	MA.7.NSO.2.2	3.1 Adding Rational Numbers	
	MA.7.NSO.2.2	3.2 Subtracting Rational Numbers	
	MA.7.NSO.2.2	3.3 Multiplying Rational Numbers	
	MA.7.NSO.2.2	3.4 Dividing Rational Numbers	
	MA.7.NSO.2.3	3.5 Solving Real-World Problems with Rational Numbers - Part 1	
	MA.7.NSO.2.3	3.6 Solving Real-World Problems with Rational Numbers - Part 2	
	MA.7.NSO.2.3	3.7 Solving Real-World Problems with Rational Numbers - Part 3	
	MA.7.NSO.2.3	3.8 Solving Real-World Problems with Rational Numbers - Part 4	
	<b>Unit 4: Solving Problems with Rational Numbers</b>		
	MA.8.NSO.1.7	4.5 Evaluating Expressions With Radicals	
	MA.8.NSO.1.7	4.6 Evaluating Expressions Using the Order of Operations	
	MA.8.NSO.1.7	4.7 Evaluating Real-World Problems Using the Order of Operations – Part 1	
	MA.8.NSO.1.7, MA.8.NSO.1.6, MA.8.NSO.1.5	4.8 Evaluating Real-World Problems Using the Order of Operations – Part 2	
		Review Unit 3	
		Unit 3 Assessment	
		<i>Approximately 10 Days Total</i>	
Unit 4: Area			
Weeks	Focus Benchmark(s)	Lesson/Topic	
Weeks 8-9 September 25- October 6	MA.7.GR.1.1	4.1 Deriving Area Formulas for Trapezoids, Parallelograms, and Rhombi	
	MA.7.GR.1.1	4.2 Finding the Area of Trapezoids, Parallelograms, and Rhombi	
	MA.7.GR.1.2	4.3 Finding the Area of Polygons	
	MA.7.GR.1.2	4.4 Finding the Area of Composite Figures	
	MA.7.GR.1.3	4.5 Exploring Relationships in Circles	
	MA.7.GR.1.3	4.6 Finding Circumference	

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	MA.7.GR.1.3	4.7 Finding Radius and Diameter
	MA.7.GR.1.4	4.8 Exploring the Area of a Circle
	MA.7.GR.1.4	4.9 Finding the Area of a Circle
	MA.7.GR.1.3, MA.7.GR.1.4	4.10 Using Circumference and Area to Solve Problems
<b>Unit 12: Surface Area and Volume</b>		
	MA.7.GR.2.1	12.1 Finding Surface Area of Right Circular Cylinders Using Nets
	MA.7.GR.2.1, MA.7.GR.2.2	12.2 Finding Surface Area of Right Circular Cylinders
	MA.7.GR.2.1, MA.7.GR.2.2	12.3 Solving Problems Involving Surface Area of Right Circular Cylinders
	MA.7.GR.2.3	12.4 Volume of Right Circular Cylinders - Part 1
	MA.7.GR.2.3	12.5 Volume of Right Circular Cylinders - Part 2
	MA.7.GR.2.3	12.6 Problem-Solving with Volume of Cylinders
		Review Unit 4
		Unit 4 Assessment
		<i>Approximately 10 Days Total</i>

### Unit 5: Scaling with Proportional Relationships

Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 10-12 October 9-27	MA.7.DP.1.3	5.1 Random Samples vs. Population
	MA.7.DP.1.3, MA.7.DP.2.4	5.2 Determining Probability
	MA.7.DP.1.3	5.3 Making Population Predictions - Part 1
	MA.7.DP.1.3	5.4 Making Population Predictions - Part 2
	MA.7.GR.1.5	5.5 Scale Factors - Perimeter
	MA.7.GR.1.5	5.6 Scale Factors - Area
	MA.7.GR.1.5	5.7 Scale Drawings
	MA.7.GR.1.5	5.8 Solving Problems Involving Dimensions and Perimeters of Geometric Figures
	MA.7.GR.1.5	5.9 Solving Problems Involving Dimensions and Areas of Geometric Figures

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	MA.7.GR.1.5	5.10 Solving Problems Involving Real-World Scale Drawings
		Review Unit 5
		Unit 5 Assessment
		<i>Approximately 14 Days Total</i>
<b>Unit 6: Solving Multi-Step Problems with Proportional Relationships</b>		
Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 13-15 October 30 - November 17	MA.7.AR.3.3	6.1 Paying Your Way in Mathlandia
	MA.7.AR.3.3	6.2 Currency Conversions
	MA.7.AR.3.3	6.3 Converting Units of Length
	MA.7.AR.3.3	6.4 Converting Mass and Area
	MA.7.AR.3.3	6.5 Converting Units of Volume
	MA.7.AR.3.2	6.6 Creating Proportions
	MA.7.AR.3.2	6.7 Using Proportions to Solve Problems
	MA.7.AR.3.2	6.8 Solving Real-World Problems Involving Proportions
	MA.7.AR.3.2, MA.7.AR.3.3, MA.7.AR.4.5	6.9 Exploring Multi-Step Proportion Problems
	MA.7.AR.4.5	6.10 Solving Multi-Step Proportion Problems
	MA.7.AR.3.2, MA.7.AR.4.5	6.11 Reasoning Through Problems Involving Proportional Relationships
		Review Unit 6
		Unit 6 Assessment
	<i>Approximately 14 Days Total</i>	
<b>Unit 7: Solving Percentage Problems with Proportional Relationships</b>		
Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 16-18 November 2- December 8	MA.7.DP.1.4	7.1 Circle Graphs
	MA.7.DP.1.4	7.2 Sectors of a Circle
	MA.7.DP.1.4	7.3 Constructing Circle Graphs
	MA.7.DP.1.4	7.4 Interpreting Circle Graphs

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	MA.7.AR.3.1	7.5 Discounts and Markups
	MA.7.AR.3.1	7.6 Determining Tax, Tip, or Fees Given a Percentage
	MA.7.AR.3.1	7.7 Solving Multi-Step Problems Involving Discounts, Taxes, Tips, or Fees
	MA.7.AR.3.1	7.8 Simple Interest
	MA.7.AR.3.1	7.9 Percent Increase and Decrease
	MA.7.AR.3.1	7.10 Calculating Percent Error
		Review Unit 7
		Unit 7 Assessment
		<i>Approximately 23 Days Total</i>
<b>Unit 8: Evaluating Numeric Expressions</b>		
<b>Weeks</b>	<b>Focus Benchmark(s)</b>	<b>Lesson/Topic</b>
Weeks 19-20 December 11-22	MA.7.NSO.1.1	8.1 Product Laws of Exponents
	MA.7.NSO.1.1	8.2 Quotient Laws of Exponents
	MA.7.NSO.1.1	8.3 Exponential Expressions
	MA.7.NSO.2.1, MA.7.NSO.2.2	8.4 Evaluating Numeric Expressions - Part 1
	MA.7.NSO.2.1, MA.7.NSO.2.2	8.5 Evaluating Numeric Expressions - Part 2
	MA.7.NSO.2.1, MA.7.NSO.2.2	8.6 Evaluating Numeric Expressions - Part 3
	<b>Unit 3: Exponents- Advanced</b>	
	MA.7.NSO.1.1	3.1 Product Laws of Exponents
	MA.7.NSO.1.1	3.2 Quotient Laws of Exponents
	MA.7.NSO.1.1	3.3 Exponential Expressions
	MA.8.NSO.1.3	3.4 Negative Exponent Law
	MA.8.NSO.1.3	3.5 Applying Exponent Laws
	MA.8.NSO.1.3	3.6 Evaluating Numerical Expressions with Integer Exponents
	MA.8.NSO.1.3	3.7 Equivalent Expressions
		Review Unit 8

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		Unit 8 Assessment
		<i>Approximately 9 Days Total</i>

### Unit 9: Algebraic Expressions

Weeks	Focus Benchmark(s)	Lesson/Topic	
Weeks 21-22 January 8-19	MA.7.AR.1.1	9.1 Adding and Subtracting Linear Expressions with Integer Coefficients	
	MA.7.AR.1.1	9.2 Adding Linear Expressions with Rational Coefficients	
	MA.7.AR.1.1	9.3 Subtracting Linear Expressions with Rational Coefficients	
	MA.7.AR.1.1	9.4 Adding and Subtracting Expressions with Rational Coefficients	
	MA.7.AR.1.2	9.5 Equivalent Numerical Expressions	
	MA.7.AR.1.2	9.6 Rewriting Equivalent Numerical Expressions	
	MA.7.AR.1.2	9.7 Equivalent Linear Expressions	
	MA.7.AR.1.2	9.8 Equivalent Expressions Using Properties of Operations	
	<b>Unit 14: Equivalent Algebraic Expressions- Advanced</b>		
	MA.8.AR.1.1	14.1 Applying Exponent Laws to Algebraic Expressions - Part 1	
	MA.8.AR.1.1	14.2 Applying Exponent Laws to Algebraic Expressions - Part 2	
	MA.8.AR.1.1	14.3 Algebraic Expressions with Negative Exponents	
	MA.8.AR.1.1	14.4 Applying Multiple Laws of Exponents	
	MA.8.AR.1.1, MA.8.AR.1.2	14.5 Applying the Distributive Property with Variables	
	MA.8.AR.1.1, MA.8.AR.1.2	14.6 Multiplying Algebraic Expressions	
	MA.8.AR.1.3	14.7 Factoring Common Monomial Factors	
	MA.8.AR.1.3	14.8 Rewriting Expressions with Common Monomial Factors	
		Review Unit 9	
		Unit 9 Assessment	
	<i>Approximately 8 Days Total</i>		

### Unit 11: Representing Proportional Relationships

Weeks	Focus Benchmark(s)	Lesson/Topic
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Week 23 January 22- 26	MA.7.AR.4.3	11.1 Graphing Proportional Relationships
	MA.7.AR.4.2, MA.7.AR.4.3	11.2 Constant of Proportionality - Part 1
	MA.7.AR.4.2	11.3 Constant of Proportionality - Part 2
	MA.7.AR.4.1	11.4 Features of Proportional Relationships
	MA.7.AR.4.1, MA.7.AR.4.2	11.5 Is it Proportional?
	MA.7.AR.4.2, MA.7.AR.4.4	11.6 Representing Proportional Relationships with Equations
	MA.7.AR.4.2, MA.7.AR.4.4	11.7 Translating Between Representations of Proportional Relationships
	MA.7.AR.4.1, MA.7.AR.4.2, MA.7.AR.4.3, MA.7.AR.4.4	11.8 Putting it All Together
		Review Unit 11
		Unit 11 Assessment
		<i>Approximately 5 Days Total</i>

### Unit 12: Functions- Advanced

Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 24-26 January 29- February 16	MA.8.F.1.1	12.1 Exploring Relations
	MA.8.F.1.1	12.2 Identifying Domain and Range
	MA.8.F.1.1	12.3 Is it a Function?
	MA.8.F.1.3	12.4 Interpreting Graphs of Functions
	MA.8.F.1.3	12.5 Sketching Graphs of Functions
	MA.8.F.1.3	12.6 Analyzing Descriptions and Graphs
	MA.8.F.1.2, MA.8.AR.2.3	12.7 Exploring Functions Using Equations, Tables, and Graphs
	MA.8.F.1.1, MA.8.F.1.2	12.8 Is it Linear?
	MA.8.F.1.2	12.9 Using Tables to Determine if a Function is Linear
	<b>Unit 10: Linear Relationships- Advanced</b>	
	MA.8.AR.3.1	10.1 Proportional Relationships
	MA.8.AR.3.2	10.2 Exploring Slope
	MA.8.AR.3.2	10.3 Finding Slope Using Graphs and Tables

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	MA.8.AR.3.2, MA.8.AR.3.5	10.4 Slope in Real-World Contexts
	MA.8.AR.3.2, MA.8.AR.3.4	10.5 Exploring Equations of Lines in Slope-Intercept Form
	MA.8.AR.3.4	10.6 Graphing Lines from Tables and Real-World Contexts
	MA.8.AR.3.5	10.7 Interpreting Linear Relationships from Graphs and Equations
	MA.8.AR.3.5	10.8 Interpreting Linear Relationships from Tables and Written Descriptions
	MA.8.AR.3.2, MA.8.AR.3.3	10.9 Writing Equations of Linear Relationships
	MA.8.AR.3.3	10.10 Writing Equations for Real-World Contexts
		Review Unit 12 and 10
		Unit 12 Assessment
		<i>Approximately 15 Days Total</i>
<b>Unit 10: Equations and Inequalities</b>		
Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 27-29 February 19- March 8	MA.7.AR.2.1	10.1 Exploring Inequalities - Part 1
	MA.7.AR.2.1	10.2 Solving One-Step Inequalities Using Addition and Subtraction
	MA.7.AR.2.1	10.3 Exploring Inequalities - Part 2
	MA.7.AR.2.1	10.4 Solving One-Step Inequalities Using Multiplication and Division
	<b>Unit 11: Solving Equations and Systems of Equations- Advanced</b>	
	MA.8.AR.2.1	11.1 Solving Equations
	MA.8.AR.2.1	11.2 Solving Equations with Variables on Both Sides
	MA.8.AR.2.1	11.3 Solutions to Linear Equations
	MA.8.AR.2.1	11.4 Solving Multi-Step Equations
	MA.8.AR.4.1, MA.8.AR.4.2	11.5 Introduction to Systems of Two Linear Equations
	MA.8.AR.4.1, MA.8.AR.4.2	11.6 Solutions to Systems of Equations
	MA.8.AR.4.3	11.7 Solving Systems by Graphing
	MA.8.AR.4.3	11.8 Solving Systems of Equations by Graphing for Real-World Contexts
		Unit 10 Assessment



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		<i>Approximately 14 Days Total</i>
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Unit 13: Numerical and Categorical Data		
Weeks	Focus Benchmark(s)	Lesson/Topic
Weeks 30-31 March 11-29	MA.7.DP.1.1	13.1 Effects of Outliers
	MA.7.DP.1.1	13.2 Justifying Measures of Center and Spread
	MA.7.DP.1.1	13.3 Determining Appropriate Measures of Center and Variation
	MA.7.DP.1.2	13.4 Comparing Graphical Representations
	MA.7.DP.1.2	13.5 Comparing Data Sets
	MA.7.DP.1.2	13.6 Comparing Data Sets and Graphs
	MA.7.DP.1.5	13.7 Representing Real-World Contexts with Graphs
	MA.7.DP.1.5	13.8 Creating Displays for Numerical Data
	MA.7.DP.1.5	13.9 Creating Displays for Categorical Data
		Review Unit 13
		Unit 13 Assessment
		<i>Approximately 8 Days Total</i>

Unit 6: Relationships in Triangles- Advanced		
Weeks	Focus Benchmark(s)	Lesson/Topic
Week 37 May 6-10	MA.8.GR.1.3	6.1 The Triangle Inequality Theorem and the Converse of the Pythagorean Theorem
	MA.8.GR.1.3	6.2 Applying the Triangle Inequality Theorem
	MA.8.GR.1.1	6.3 Pythagorean Theorem
	MA.8.GR.1.1	6.4 Using the Pythagorean Theorem to Solve Real-World Problems
	MA.8.GR.1.2	6.5 Finding Distances on the Coordinate Plane
	MA.8.GR.1.2	6.6 Solving Real-World Problems on a Coordinate Plane with the Pythagorean Theorem
	MA.8.GR.2.4	6.7 Proportional Relationships and Similar Triangles

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	MA.8.GR.2.4	6.8 Solving Real-World Problems Using Similar Triangles
		Review Unit 6
		Unit 6 Assessment
		<i>Approximately 4 Days Total</i>

### Unit 15: Transformations

Week	Focus Benchmark(s)	Lesson/Topic
Week 38 May 13-17	MA.8.GR.2.1	15.1 Slides, Flips, and Spins
	MA.8.GR.2.1	15.2 Reflections and Rotations
	MA.8.GR.2.1, MA.8.GR.2.3	15.3 Translations
	MA.8.GR.2.3	15.4 Reflections on the Coordinate Plane
	MA.8.GR.2.3	15.5 Rotations on the Coordinate Plane
	MA.8.GR.2.1, MA.8.GR.2.3	15.6 Describing Rigid Transformations
	MA.8.GR.2.2	15.7 Dilations
	MA.8.GR.2.2, MA.8.GR.2.3	15.8 Dilations on the Coordinate Plane
	MA.8.GR.2.2, MA.8.GR.2.3, MA.8.GR.2.4	15.9 Scale Factors of Dilations
		Review Unit 15
		Unit 15 Assessment
	<i>Approximately 4 Days Total</i>	

### Unit 16: Properties and Theorems of Angles

Weeks	Focus Benchmark(s)	Lesson/Topic
Week 39 May 20-24	MA.8.GR.1.4	16.1 Angle Relationships
	MA.8.GR.1.5	16.2 Angle Relationships in Triangles
	MA.8.GR.1.6	16.3 Interior Angles of a Polygon
	MA.8.GR.1.6	16.4 Finding Missing Angles in Polygons
		Review Unit 16
		Unit 16 Assessment

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		<i>Approximately 4 Days Total</i>
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